THE CHEMIST AND DRUGGIST.

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THE PROPOSED ACT OF INCORPORATION.

THE Second Annual Report of the United Society of Chemists and Druggists is a satisfactory record of past labours and an important index to future action. It tells us how the interests of the trade have been protected and promoted by the Society, and offers for our consideration a thoroughly practical scheme for elevating the entire trade. We need not review this report, for it is printed at length in another part of our journal, and will not be passed over by any of our friends.

We give below the suggestions made by the Committee for the proposed Act of Incorporation referred to in the Report :—

SUGGESTIONS FOR A PROPOSED ACT OF INCORPORATION.

Acting in accordance with the generally-expressed wish of the Society, and being desirous to do all that may promote the interests of the trade, the Committee have undertaken to lay before the Chemists and Druggists of the United Kingdom a proposition for a GENERAL ACT OF INCORPORATION.

They propose—

That the Act shall be based upon a recognition of all claimants to an interest in the trade of a Chemist and Druggist until six months after the passing of the said Act.

That after such date it shall be incumbent upon all who enter the trade of a Chemist and Druggist to undergo an examination by a Board of Examiners duly appointed.

That the examination shall be of the following order and kind :—

First. *Proof of having served an apprenticeship of not less than five years.* EXEMPTION FROM THIS ONLY TO BE ALLOWED UNDER SPECIAL AND WELL-DEFINED CONDITIONS FOR OTHERWISE SECURING THE PRACTICAL KNOWLEDGE REQUIRED.

Second. *Ability to read prescriptions with ease and correctness.*

Third. *A competent knowledge of all Drugs in general use, with their doses.*

For the proper carrying out of these conditions, it is proposed that the United Kingdom shall be conveniently divided into District Associations ; that Local Boards of Examiners shall be periodically appointed by them ; and that each examination fee shall not exceed two guineas,—one half being devoted to the General Fund, and the other half to the remuneration of the Examiners.

That to provide an efficient machinery for the working of the said Act of Incorporation, it shall be enacted that every Chemist and Druggist be required to pay an annual registration fee of 12*s.*, and all assistants and apprentices 6*s.* each. This amount, although individually small, would, from an estimate of the number now engaged in the trade, produce an income of £20,000 per annum, and be ample for the support of local libraries and lectures, and for the general encouragement of intellectual and scientific culture.

That not less than two-thirds of the income shall be at the disposal of the various district Associations ; and that the remaining portion shall be applied to the discharge of the general expenses of the Institution, and the provision of a Benevolent Fund under

the government of an annually-appointed Committee representing the entire trade, with power to make such by-laws as experience and circumstances may suggest.

It needs only be mentioned that it is not intended in any way to interfere with the chartered privileges of the Pharmaceutical Society, which, it is hoped, will co-operate with the United Society in promoting a measure of such vital importance to the trade.

The Committee deeply feel their responsibility in making this proposal, and being influenced only by a desire to give practical effect to the wishes of the trade, they will listen to suggestions from any quarter which may tend to its efficiency. They wish to caution the trade against hoping for an immediate result; but whilst counselling patient endurance, and urging upon all the duty of individual effort and combined action, they confidently anticipate a successful issue.

LIQUOR AMMONIÆ ACETATIS.

BY BARNARD S. PROCTOR.

SIMPLE as it may appear to prepare a definite solution of a salt like acetate of ammonia, there is still considerable variation in the strength of the solutions used in pharmacy. Perhaps the root of the evil lies in the acid being made the means of deciding the strength of the resulting solution; the acid being liable to variation, and its saturating power being somewhat less readily determined than other acids. Had we been directed to use a definite quantity of sesquicarbonate of ammonia free from incrustation of bicarbonate, to neutralize this with acetic acid, and then add water to produce a definite measure, more satisfactory results would have been obtained. That the London Pharmacopœia in directing a pint of dilute acetic acid to be neutralized with nine drachms, or a sufficient quantity of the sesquicarbonate, over-states the quantity, may be readily seen by a simple calculation, thus:—The strength of acetic acid is directed to be such, that 100 grains shall be neutralized by 87 grains crystallized carbonate of soda, and will therefore be neutralized also by 35½ gr. sesquicarbonate of ammonia. As the equivalent of crystallized carbonate of soda is to the equivalent of sesquicarbonate of ammonia, so is 87 to 35½:

144 : 59 : : 87 : 35½.

Twenty-three fluid drachms of this acid make a pint of the dilute acid; f.ʒj of water is 54·7 grains; 23 f.ʒ will therefore be 1,258 grs., to which add five ozs. for the sp. gr. of the acid (1·048): 1,258 + 62 = 1,320, the number of grains of P.L. acetic acid in a pint of the dilute. From the neutralizing power of the acid as above, 100 grains requiring 35½ of sesquicarbonate, 1,320 will require 468, or somewhat less than 8 drachms instead of about 9, thus—

100 : 35½ : : 1,320 : 468½.

Consequently, if 1 ounce of sesquicarbonate of ammonia free from incrustation be neutralized with acetic acid of any strength, and the resulting liquor be made to measure a pint by the addition of water, or by evaporation if the acid has been too weak, a solution of the P.L. strength will be obtained; and if 8 ounces be treated in the same way, a pint of concentrated "Liquor Ammon. Acet." will be produced, of which f.ʒj will be equal to f.ʒj of the P.L. strength. It is a pity that some firms have introduced a Liq. Am. Conc. 1 to 11,—one part to seven being a convenient and acknowledged standard for concentrated preparations; and in the present case a still more important question is the actual value of the solution. Is one part of the article so offered equal to twelve parts of the P.L. preparation? Twenty fluid ounces of the 1 to 7 strength should contain 9¾ ounces of dry acetate of ammonia (NH_4 O $\bar{A}$), or 17¾ ounces of the crystallized acetate (NH_4 O $\bar{A}$ 6 Aq). Twenty fluid ounces of the 1 to 11 strength should contain 14⅛ ounces of the dry acetate, or 25 ounces of the crystals,—a quantity which does not appear probable.

11, Grey-street, Newcastle-on-Tyne.

PERFUMES AND PERFUMERY.

BY CHARLES W. QUIN, F.C.S.

THE employment of perfumes is, no doubt, almost coeval with the existence of organs wherewith to appreciate the pleasure to be derived from their use. The couch of our first parents was probably strewn with the fragrant blossoms of the rose, the jasmine, and the violet, long before the unwholesome and insufferable stench of the sacrificial victims rendered the burning of odoriferous gums at the altar a necessity to their descendants as a preservative of health and comfort. Besides employing fragrant incense during their religious sacrifices, the whole of the Eastern nations have from the remotest ages been accustomed to the secular use of perfumes, both as antidotes to the baneful effects of the masses of quickly-decaying animal and vegetable matters which are so unavoidably frequent in all hot climates, and as refreshing stimulants during the hottest parts of the day. From the East this pleasant practice soon spread into Greece; and the fulminations of Socrates, Solon, and other philosophers, against the use of perfumes by the Greeks, show us to what a pitch the luxurious fashion was carried. The Romans soon learnt the art of making perfumes from their refined neighbours; and the sensual Capuans were so addicted to scenting their houses, furniture, horses, slaves, and persons, that one large street of the city was entirely occupied by perfumers. In the early Christian Church, perfumes were used in the form of incense,—a practice which remains in the services of the Roman and Greek Catholic Churches to the present day. During the Middle Ages the use of scents in all forms was universal, as is evident from the frequent allusions made to them in the writings of that epoch. The English Puritans, like their classic prototypes the Lacedemonians, discountenanced the use of scents as an unnecessary and sinful luxury, and the manufacture of perfumery in this country declined until the beginning of the present century, when the growing demand for perfumes by the Court, added to the stoppage of Continental supplies during the French war, put English manufacturers on their mettle. They had, however, legislative restrictions of a serious character to work against, in the form of the glass, paper, and spirit duties, two of which have been lately removed. The Exhibition of 1851 showed the world that British perfumers could pretty nearly hold their own against their foreign competitors, and in 1862 the trade was thought of sufficient importance to receive separate classification and a distinct jury. Few visitors to the Exhibition of last year will forget the tasteful show made by the exhibitors of Class IV.D. in the Eastern Annex; and we have reason to know that the consumption of British perfumery, both at home and abroad, has been greatly increased by the display of what our manufacturing houses were capable of doing on that occasion. The *science* of perfumery has greatly progressed of late years, and now, instead of mingling odours without rhyme or reason, the perfumer is guided by certain fixed principles in mixing his scents. The manufacturer has also received important aid from the progress of organic chemistry; and although as yet the laboratory has not taken the place of the flower-garden, still the experiments of certain perfumers, who are also scientific chemists, seem to indicate that some of the organic ethers may be made to yield odours of a sufficiently delicate nature to be used in perfumery.

A few years since, a first-rate pharmacist would have thought it *infra dig.* to sell perfumes. This silly notion has long since disappeared, and there are now few fashionable chemists' shops which have not an important portion of the counter set apart for the display of these harmless luxuries. We have therefore thought it right to accept the offer made by a distinguished perfumery firm, and vary our series of articles by giving our readers an account of

A VISIT TO MESSRS. PIESSE AND LUBIN'S "LABORATORY OF FLOWERS."

The home manufacturing premises of Messrs. Piesse and Lubin are situated at No. 2, New Bond-street, and from their architectural embellishments form one of the leading

ornaments of that fashionable promenade. Besides this establishment, they have extensive flower farms near Nice, in the south of France, where they grow large quantities of roses, violets, and other odoriferous flowers, which are manufactured on the spot into greases, oils, ottos, and extracts. At Mitcham, in Surrey, they have large lavender gardens, besides an extensive bonded warehouse at the London Docks, where they make their perfumed spirits for foreign and colonial consumption. Their flower-gardens at Nice produce violets, roses, jasmine, tuberoses, jonquils, orange-blossoms, acacia, and numberless other fragrant flowers, from which scents are extracted principally by four processes: 1. *Expression;* 2. *Distillation;* 3. *Maceration;* and 4. *Absorption* or *Enfleurage*.

The first process is used in the case of plants whose parts contain large quantities of odoriferous essential oil, such as lemon, orange, and citron peels. These portions of the plant are put into a press, which is in principle an enlarged tincture press, consisting of an iron vessel of immense strength, fitted with a perforated false bottom, on which is placed the material from which the oil is to be expressed. A powerful screw, connected with a piston, fitting into the vessel and worked by a lever, forces the substance closely together, squeezing out the liquid portions. The oil obtained is of course largely contaminated with watery extracts, from which it is separated by decantation. Distillation is adopted when the amount of essential oil is less than in the last instance. The distillation of oil of lavender may be taken as an example. The leaves are thrown into a still either heated by steam or by the naked fire, and containing a large quantity of water. As the heat rises, the steam passes into the refrigerator, carrying with it the essential oil of the plant. By an ingenious contrivance, patented by Messrs. Drew, Heywood, and Barron, the condensed steam is made to re-enter the head of the still, leaving behind it the essential oil in the refrigerator, thus allowing the same water to be used over and over again. In the stills employed by Messrs. Piesse and Lubin, steam at from ten to fifteen pounds pressure is used as the source of heat, it having been found that the French method of working by the direct action of the fire is liable to give the distillate a peculiar empyreumatic or burnt odour. The third method is used for finer odours, such as the rose or violet. A certain quantity of purified beef or deer suet is mixed with purified lard, and put into a clean porcelain or metal pan. Steam heat is applied, and the flowers from which the odour is to be extracted are carefully picked and thrown into the melted fat, wherein they remain for one or two days. The fat dissolves the essential oil or other odoriferous principle contained in the flowers, and of course becomes thereby highly perfumed. The process is continued with fresh portions of flowers until the grease is of the desired strength, the different strengths being indicated by the French manufacturers by numerals. Where perfumed oil is required, fine olive oil is substituted for fat. The oils thus prepared are known as the *huile antique* of such and such a flower. The orange, rose, and cassia pomades and oils are prepared by this process. The fourth process of *absorption* or *enfleurage* is the most important of them all; and as little is known of it in this country, a minute account of it will interest our readers. We also call their attention to it for another reason. There are many of our English flowers whose odours have become household words, but which have never been introduced largely into perfumery on account of the difficulty of preparing scents from them by the ordinary means of distillation or maceration. As examples of them, we may mention the wall-flower, the lilac, the cowslip, and twenty others. The process of enfleurage would, no doubt, suit them admirably, and we recommend our readers most strongly to make a few experiments in this direction. The process is used for those flowers whose delicate odours would be destroyed or changed by heat, and yields all those fine pomades and oils known as "French pomades and oils." The whole operation is conducted in the cold. Square frames, three inches deep, two feet wide by three feet long, are provided with glass bottoms, upon which is spread a layer of fine grease about a quarter of an inch thick; on this are sprinkled the flowers from which the scent is to be extracted. Another frame similarly charged is placed on this, and so on until a large pile is made. The flowers are changed

from time to time during the whole of the blooming season. Oils are prepared in a similar manner, coarse cotton cloths soaked in the finest olive oil being substituted for the layer of grease, and a wire gauze framework being used instead of glass. There are many odours such as Tonquin bean, ambergris, vanilla, castor, and a number of others, which are extracted by soaking the substance in strong alcohol.

Although the farms of Messrs. Piesse and Lubin at Nice supply them with large quantities of raw material both for consumption and sale, there are many substances which they are of course obliged to import or buy in the markets,—such as ambergris, civet and vanilla, the essences of tropical plants, &c.

The warehouse at the London Docks is used for storing and mixing perfumes in bond for the colonial and foreign markets; and as precisely the same processes, and many more besides, are carried on at the manufactory at Bond-street, we prefer giving a description of the latter establishment. Descending from the well-appointed and tastefully-arranged shop to what we supposed must be a dark cellar, we are agreeably surprised to find ourselves in a large, light, but somewhat odoriferous laboratory, in which a number of men and boys looking like very clean *chefs de cuisine* are engaged in various employments. Our attentive conductor takes us first into a large cellar, running half-way under Bond-street, and containing an immense number of tin and copper cases. These, we are informed, contain the pomades, oils, ottos, and extracts manufactured at Nice and elsewhere, which require to be kept as cool as the choicest *Chateau Margaux* or Comet Port, for fear of losing their delicacy. From the cellar, which contains some thousands of pounds' worth of raw material, we pass back to the laboratory, and inspect the method of extracting the essential oil from the pomades prepared by maceration or enfleurage. We should, perhaps, premise that these pomades are infinitely stronger than ordinary pomatum, a small piece the size of a walnut containing sufficient essential oil to perfume a large quantity of grease. The pomade being taken out of its case, is placed in an iron cylinder perforated at the bottom with a series of slits, and pressure is applied by means of a closely-fitting piston to the top of the grease, which is forced through the slits in a number of long ribbons. These ribbons are macerated in the very best alcohol for several days, until nearly the whole of the essential oil is extracted from the pomade. The spent grease still, however, retains sufficient essential oil to render it useful for making pomatum. The solution of essential oil in alcohol thus obtained forms the ordinary *extrait* of the perfumes. The *extraits* (by the way, the nomenclature of perfumery is as yet entirely French), when judiciously combined, form the so-called *bouquets*, and the thousand and one other scents with endless fanciful names that are now so fashionable. Here it is that the skill of the olfactory artist is exerted. Odours have a certain resemblance to musical notes. Without much stretch of imagination, we may look on the light and sharp verbena as a high note, and on the dull and heavy patchouly as a note to be placed in the lowest bass, while the mellow almond and tuberose seem to occupy a place between them. The injudicious mingling of odours is, therefore, like the inharmonious blending of notes and colours. Again, by the proper combination of simple extracts, other simple odours may be very successfully imitated. Thus, a mixture of the extracts of orange-peel, lemon-peel, and lemon grass, gives a perfect imitation of the simple extract of verbena. Besides the extracts obtained from the enfleurage pomades, there are also ottos, essential oils, and alcoholic extracts almost without number, all of which are used for the same purposes. The preparation of the various bouquets and mixtures which Messrs. Piesse and Lubin have so successfully introduced to the public under the familiar titles of "Frangipani," "Kiss-me-quick," "The Trump Card," &c. &c., being merely a matter of mixture and filtration, need not be described.

Several stills are at work all heated by steam; but as our readers are well acquainted with the process of distillation, we need not stop to describe them.

In one corner of the laboratory is a soap-boiler, also heated by steam. In it is slowly simmering a mixture of curd, oil, and marine soap, the judicious union of the three forming a toilet soap, having the necessary qualities of fine grain, moderate hardness,

and lathering properties, besides the capability of preserving its shape without shrinking. When the mixture reaches a certain degree of fluidity, the desired scent is mixed in with a crutch, shaped like an inverted ⌊, curved to fit the hollow bottom of the pan. This is worked about until perfect uniformity is produced. The scent having been "crutched" in, the colouring matter is added if necessary in the same manner, and the whole is turned into the "frame." The "frame" is a box made in horizontal sections, the width of the intended bar of soap. When the soap is sufficiently cool, it is cut into slabs by a wire guided by the sections of the frame. The slabs are allowed to cool for two or three days, and are then cut into bars, and lastly into squares, which are stamped with various shapes between brass dies. When the scent to be added will not bear heat, the boiler is dispensed with, the mixture of soaps, scent, and colouring material being made in a mortar. Transparent soap is made by dissolving dry soap shavings in alcohol, scenting, casting in appropriate moulds, and finally drying in a warm situation. The duty on spirit acts very prejudicially against the manufacture of transparent soap in this country, and will continue to do so until the Legislature allow spirit to be used for manufacturing purposes free of duty. Methylated spirit has been tried for the purpose, but, as might be expected from its abominable odour, without success. Besides ordinary toilet soaps, Messrs. Piesse and Lubin manufacture medicated soaps very largely. The sulphur, creasote, and mercurial soaps are much used for skin diseases; and those who wish to fancy themselves at the sea-side without leaving their own toilet-tables, cannot do better than use the iodine and bromine soaps made by the firm.

In different parts of the laboratory are various troughs, mortars, and presses, to describe all of which minutely would occupy too much time. At one, a boy is mixing various powdered woods to form the stuffing for sachets; another is performing the same operation with ground almonds, and orris-root powder for almond meal. Further on, a man is stamping delicate sea-green masses of soap with the name of the firm. In a far corner of the laboratory is a small room, something like a pantry, in which are closely kept under lock and key the most valuble raw materials used by the perfumers. The shelves and drawers contain bottles of rare ottos and essences seldom seen in this country, nearly all of which smell most vilely in their concentrated form. Amongst them we may mention true Turkish attars of rose, worth—we are afraid to say how many guineas an ounce; oil of birch bark, used for perfuming Russia leather, and rarely seen in this country; musk pods in their odd silk-covered boxes, with their chop papers written in choice Chinese inside; civet, which, in large quantities, has a stronger stercoraceous smell than any stable; various organic ethers which have been made the subject of experiment, and which give one temporary asthma; some splendid specimens of vanilla pods, nearly a foot in length, covered with long plates of benzoic acid: and so on, until the nerves of smell are bewildered, and we are glad to escape to the upper floors, where the only smell to be met with, is that of brown paper enclosing thousands of dozens of bottles and fancy boxes. On one of the floors, a boy is constantly employed in making the "ribbon of Bruges," which is now so largely used as a fumigatory. It consists of tape soaked first in a solution of nitre to give its mouldering properties, and afterwards drawn through a solution of benzoin, myrrh, and other odoriferous substances. The ribbon is cut into yard lengths, and put into boxes provided with a slit in the upper cover. The ribbon is drawn out to the length of an inch or so; lighted and blown out, it smoulders down to the slit in the box, gradually diffusing a pleasant odour throughout the room. The "ribbon of Bruges" is one of the numerous little tasteful "oddments" for which the house of Piesse and Lubin has rendered itself famous. Some idea of the favour in which this article is held, may be gathered from the fact that it is frequently produced at the rate of two miles and a half a day. Messrs. Piesse and Lubin have made the pistachio nut their especial property, by the way in which they have utilized its numerous products. This nut, which has hitherto been only known to us in connexion with *pré-salé* mutton, contains a very bland, colourless oil, which exists in it in such quantities that it may be squeezed out between the thumb and finger. This oil serves not only as a hair oil,

but also forms an excellent soap. The nut when ground makes a first-rate meal for the face and hands, in lieu of the ordinary violet powder; and when ground with scented water, forms a cream which is used as an anti-irritant for the skin in hot weather.

Passing down once more into the shop, we are shown a number of little fancies, which take immensely with juvenile fashionables of both sexes. The finger-rings provided with a little jet of scent for odoriferous practical joking, we have already noticed in this Journal. They have now numberless companions in the shape of "nuts to crack"—walnuts containing tiny bottles of scent; perfumed shells; scented gems; "rusma," for taking off the hair; "philocome," for putting it on again; "schnouda," a white grease containing alloxan, which turns a beautiful carmine when rubbed in the skin for a short time; "kohl," for the eyebrows; "henna," for the nails; and that horrible invention of the Empress Eugenie's—gold powder for hiding the hair.

We pass once more into the evil-smelling town, much pleased with our visit to the "Laboratory of Flowers," thankful for the painstaking courtesy we have received, but with our nose in such a state of confusion that we question whether we shall ever again be able to tell the difference between violets and sulphuretted hydrogen, *eau de Cologne*, and *eau de Tamise*.

Mr. Septimus Piesse has just published a third edition of his "Art of Perfumery," much enlarged and improved, which we have much pleasure in cordially recommending to our readers.

NEW REMEDIES.

LEPTANDRA VIRGINICA.

Synonyms.—Culver's Physic, Culver's Root, Virginia Speedwell.

This is a herbaceous perennial, the *Veronica Virginica* of Linnæus, and a member of the Natural Family *Scrophulariaceæ*, the Figwort Order. It is indigenous throughout the States of North America, and particularly abounds in sunny localities having a calcareous soil. It was formerly recognized in the Pharmacopœia of the late United States, but was omitted in the edition of 1840.

Botany.—The stem is herbaceous, from three to four feet in height, with the leaves disposed upon it in whorls. The flowers, which are arranged in the form of a long spike on the summit of the stem, are white; a variety with purple flowers is, however, occasionally met with. They bloom during the months of July and August. The rhizome, commonly termed the root, is the portion employed for medicinal purposes.

Chemistry.—The rhizome has a bitter and nauseous taste, and yields its active properties to boiling water. One of the so-called "concentrated preparations," said to be an impure resin, prepared by pouring an alcoholic tincture of the rhizome into water, and termed *Leptandrin*, is obtained from it. It occurs in the form of a darkish-brown powder, and is stated to be not unfrequently prepared by mixing the alcoholic extract with the powdered rhizome.

Medicinal Properties.—In the fresh state, the rhizome is said to act violently as a cathartic, and sometimes as an emetic; but these properties become greatly modified during the process of drying. It is reported to possess valuable tonic, cholagogue, and laxative properties, and to be much employed in America in hepatic affections, as it acts on the liver with energy and without active catharsis: for this purpose it is said to be advantageously given in conjunction with the fluid extract of mandrake (*Podophyllum peltatum**). As a laxative and tonic, it is employed in bilious and typhoid fevers, and in dyspepsia, diarrhœa, and dysentery. Leptandrin is stated to be employed with safety and efficiency in the treatment of diarrhœa, cholera infantum, typhoid fever, some forms of dyspepsia, and all diseases connected with biliary derangements. It has of late been introduced to the notice of medical men in this country, and, from what we have

* An article on this plant will be found in our Second Volume, page 15.

heard, it seems likely to sustain its native reputation and prove a useful medicine. In an article in our contemporary the *Lancet*,* the action of this medicine is thus described:—"The effect of leptandrin is to gently excite the liver and promote the secretion of bile, without producing the least irritation of the bowels. It does not purge at all, and even its laxative effect is very slight, while on the stomach it acts as a decided tonic. This remarkable action renders leptandrin most valuable in diarrhœa and chronic dysentery, where the alvine secretions are destitute of bile and the mucous membrane is irritable. It is said that under its influence the stools soon assume a natural colour and consistence. In all cases requiring a mild stimulus to the liver, such as we usually seek in small doses of blue pill, with opium to prevent purging, the leptandrin is better. In combination with quinine, it is alleged that it renders the latter more certain and efficacious in the treatment of intermittents; and given in continued doses after powerful evacuation by podophyllin or calomel, it maintains a slight but effectual action, restorative of a healthy secretion of bile and daily well-formed stools. Combinations of this with iridin† and small doses of podophyllin will strike practitioners as being very useful in many cases."

Another writer thus describes its medicinal virtues:—"This is not, strictly speaking, a cathartic: it is aperient, alterative, and tonic. Its effects on the liver are peculiar. In cases of children with diarrhœa, where there is evidently a lack of the proper biliary secretion, but where, owing to the already irritated condition of the bowels, the ordinary medicines for exciting the liver are inadmissible, this seems to be the very thing needed. While it acts freely on the liver, instead of purging, it only changes the discharges from the light, watery, slimy condition to a darker bilious state, rendering them more and more consistent until they become perfectly natural, without having been arrested entirely, or at any time aggravated. At the same time, it acts as a tonic, restoring the tone of the stomach and improving the digestion. It is a valuable remedy in dyspepsia."

Preparations and Doses.—The following are given by Messrs. Tilden and Co. in their book of formulæ:—Leptandrin, gr. ¼ to gr. j. in acute cases, and from gr. j. to grs. ij. in chronic cases. Fluid extract, from ℥ ½ to ℥j. They also give formulæ for the preparation of a mixture, syrup, tincture, and compound pills of leptandrin. The dose of the powdered rhizome is from grs. xx. to ʒj., but it is rarely employed.

UNITED SOCIETY OF CHEMISTS AND DRUGGISTS.

SECOND ANNUAL REPORT.

With the close of the second financial year of the Society, the periodical duty devolves upon the Executive Committee to render an account of their stewardship.

The first Annual Report sketched forth the rise and progress of the Society; how the difficulties, inseparable from its formation without preliminary means, were surmounted, and its influence extended over the country. It told of towns visited, of associations formed, of members added, of principles advocated, and of the Benevolent Fund happily inaugurated. The Committee made it their early care to place the Society upon a broad numerical basis, so as to give a moral force to its further proceedings; and they have now much pleasure in stating that the second year of the Society's existence closes with an income more than doubled, and two thousand members upon its roll.

Important as were the transactions of the first year, those of the second came upon the Committee with accumulative force and interest. No sooner had they complied, at considerable cost, with the demand of the Society for Certificates of Membership, than the introduction of Mr. Hunt's Juries Bill in Parliament afforded them an opportunity to originate a movement for the exemption of all Dispensing Chemists from Jury service.

* Aug. 30, 1862, p. 239.

† An article on the Iris Versicolor, from which this principle is extracted, will be found in our Third Volume, page 125.

The time for action was short, and much had to be done. Petitions signed respectively by the President of the Society, the Mayor of Manchester, and numerous gentlemen representing the intelligence and respectability of the trade, were presented from London, Manchester, Nottingham, Bolton, Yarmouth, and other towns, by Mr. Crawford, Sir Robert Clifton, Mr. Turner, Sir E. K. Lacon, and Capt. Gray. The author of the Bill, Mr. Hunt, and other members of the House, were waited upon personally to procure their support; and the Committee feel that they should be guilty of a dereliction of duty, were they not specially to record their grateful sense of the uniform kindness, support, and encouragement they received from Mr. Western Wood, the City Member.* From an interview with the author of the Bill, and with the Government at the Home Office, as well as from some correspondence with Sir George Grey, the Committee were encouraged to hope for success in procuring this much-desired boon for the trade; but they regret that a clause limiting the exemption to members of their own body was introduced instead by the Council of the Pharmaceutical Society, who had hitherto claimed the support of the trade, as the guardians of their interests. The exemption sought for was not a privilege, as absurdly assumed, but a *right based upon public utility;* and to confer it upon a few individuals under the cover of a definition which, instead of defining the qualified Chemists of the trade, positively excluded them, was more than a mistake—*it was a wrong*, for it made an artificial distinction between equally-deserving competitors for public confidence.

When it was known in the country that the House of Lords had insisted upon retaining the clause limiting the exemption from Jury service to members of the Pharmaceutical Society, the fruit of this partial legislation was soon apparent.

Claims for public support were made upon the ground of parliamentary recognition; and professional periodicals directed attention to the favoured few as competent dispensers of medicines, whilst they held up the majority of Dispensing Chemists as ignorant and incompetent persons. This injustice and humiliation was deeply felt by the trade. Indignation was roused. Numerous cases of loss and inconvenience arising from the necessity of attendance upon Juries were detailed to the Committee; even in towns where the Pharmaceutical Council were known to exercise great influence, resolutions protesting against such an unjust limitation of the exemption clause were unanimously adopted; and in response to the general wish of the trade, the Committee of the United Society pledged themselves to demand redress whenever the opportunity might occur.

The public want, *not favoured* practitioners in Pharmacy, *but competent Dispensers;* and the Legislature requires a distinction between the competent dispenser and the incompetent dealer in drugs. *Chemists and Druggists then must be a registered body to be recognized.* Now comes the question—*How can an effective registration be accomplished with a due regard to existing interests?* After mature and anxious consideration, the Committee answer—By AN ACT OF INCORPORATION FOR THE ENTIRE TRADE. They have the experience of two corporate bodies to guide them in this matter. The incorporation of the Apothecaries was *complete*, for it included every individual claiming to practise as an apothecary; and now, the public is safe against the inroad of unqualified apothecaries, for every practitioner in that body is a registered member. The incorporation of the Chemists and Druggists constituting the Pharmaceutical Society, on the other hand, was *incomplete*, being limited, in the first instance, to a few individuals; and now that the Society has been twenty-two years in existence, instead of absorbing and elevating the trade to the dignity of a profession, and supplying the public with a duly-qualified body of practitioners in pharmacy, the public remains defenceless against incompetent dealers in drugs, and the *Society itself is powerless by the side of the trade it professed to regenerate.* Both these Institutions aimed at the same object; but one has proved a success, the other a failure.

The Apothecaries' Company has succeeded, because it respected the interest of every *existing* apothecary in his business, and guaranteed the qualification of every future practitioner. The Pharmaceutical Society has failed, because it has *not* respected the

* By the recent death of this gentleman the Society has lost one of its best friends.

interest of every *existing* Chemist and Druggist in his business, and has *not* guaranteed the qualification of every *future* practitioner; and those whose interests it has thus ignored constitute the *trade*. Hence comes the necessity to begin again, and to include within the corporation every man claiming to have an interest in his trade as a Chemist and Druggist.

It is with no unkind feeling that the failure of the Pharmaceutical Society to fulfil its mission is thus traced to its source; much less is there any desire to underrate the good it has done. It is frankly admitted that its founders had an earnest desire to elevate the trade, and it is readily believed that many of its students owe their scientific progress and their success in business to their connexion with that body; but the Committee's concern is not with them, but with the *thousands of Chemists and Druggists now in business, and the generation to follow them*. How can the former be placed on a political footing with the members of the Pharmaceutical Society, and how can a race of competent practitioners be secured in the latter? Both these desiderata may be achieved by means of a corporation inclusive of every claimant to recognition as a Chemist and Druggist; and the educational process will be much facilitated by the practical knowledge acquired by apprenticeship, accompanied with every possible encouragement to self-culture and scientific inquiry, inexpensive local boards of examination, and certificates of qualification as the only means of access to the trade.

The Committee adhere to free trade, equal rights, and educational progress as essential principles; and they have not found it expedient to alter the Society's objects, which were originally framed of a comprehensive character, to avoid the error of other institutions, which have wrecked their usefulness and endangered their existence by making their objects so fixed and arbitrary, as to preclude the suggestions of experience in alterations or additions, which their interest or their exigencies might require.

The wisdom of this is now apparent. Under the head of Object No. 2, as now expressed, they are enabled to give special prominency to an incorporation of the trade. With an object so elastic, they can, without the slightest deviation, seek to promote any plan for the good of the trade, or to remedy any evil; and they now direct attention to the inequality of the licence charged upon patent medicines between town and country, as based upon a false principle, and will use their best efforts to reduce the licence to a uniform minimum rate.

They have also the pleasure to introduce for consideration, the proposal of Mr. Barnaby, the Society's local secretary at Rochester, that an Insurance Fund should be instituted to provide counsel, and to defray the law expenses of the subscribers in any action at law in which they may have been duly advised by the solicitor to the fund. This proposal was considered at the half-yearly meeting of the General Committee, and in consideration of the constant liability of Chemists and Druggists to vindictive prosecution, it was agreed that the proposal should have a place in this Report, and be commended to the attention of the Society. It is estimated that the Fund might be conducted efficiently by 400 or 500 members, subscribing 10*s*. each per annum. Several gentlemen have signified to Mr. Barnaby their readiness to subscribe, and the Committee will be glad to countenance and aid the project by receiving the names of others who may wish to join it: it being, however, understood that the scheme is entirely optional, and in no way affects the annual 5*s*. fee of membership with the Society.

From the foregoing summary of the year's proceedings, the Committee trust they will not have laboured in vain, nor spent their own strength or the money of the Society for nought.

They have been zealous to promote the objects of the Institution. But beyond the necessary cost of doing so, they have felt it to be their duty, in accordance with sound economy, to devote the annual surplus to an extension of the Society, until its income shall be adequate to all its requirements; and they joyfully look forward to a not very distant period, when, relieved from the inevitable charge of organization, they may be in a condition to direct the whole financial strength of the Institution exclusively to the furtherance of its objects, and to hand over a large balance to the Benevolent Fund.

Hampered as the Committee have been for the want of means, they challenge the strictest censor of their proceedings to point out one object of the Society which has been neglected. The Benevolent Fund is rapidly approaching the minimum amount of £500 for investment, and they hope that in a year or two the voting papers will go round and bring relief to the oldest and worthiest of the Society's necessitous poor. District Associations have been formed, and many members added to the Society, who, in their various localities, might meet in good fellowship and union for social, trading, or literary purposes, and superintend their local affairs. The Committee have been sensibly alive to their responsibility in devoting so much time and money to local organization; but knowing the advantages of sectional activity, they have relied upon the honour and loyalty of the gentlemen upon whom the guidance of these important associations rested, to harmonize a healthy spirit of local independence with a cordial co-operation with the Central Committee. Indeed, they cannot too frequently remind them that the success—nay, *the very existence of the Society depends upon the fidelity of these associations to the principle of combination for the general good.*

Early and Sunday Closing has been advocated when and wherever expedient; and in some towns a good understanding has been promoted amongst the trade, resulting in a better observance of the Sabbath, and a diminution of business hours.

Legislative Enactments have been jealously watched, as in the case of the Juries Bill; and if the Committee were on that occasion defeated in their efforts to procure equal rights for equally deserving men, they have the satisfaction to believe that the discussion of this question has so developed public opinion that no chartered body will again obtain the exclusive enjoyment of a citizen-right.

Questions relating to Trade Rights have in all cases been answered, and many anxious inquirers have had their minds set at rest, many disputes have been settled by amicable arrangement, and not a few members have been protected from legal penalties through this salutary object of the Institution.

The Register also, to which, on behalf of many deserving young men, we ask more attention from the principals, has been the means of bringing employers wanting assistants and assistants wanting employment together.

In conclusion, the Committee thank the numerous and rapidly-increasing Subscribers to the Benevolent Fund, which must be the highest and noblest object of the Institution, so long as charity is recognized as a duty, not for a season, but coeval with suffering humanity. They wish especially to thank the wholesale houses who have helped the Society both by their liberality and their influence. They would also acknowledge the brotherly spirit in which many members of the Pharmaceutical Society, eschewing the restricted policy of their official leaders, have worked with them for the good of the trade; and they would not be unmindful of the useful labours unostentatiously but generously given to the cause by some of the local secretaries, whose zeal and devotion stand in bright contrast with the apathy of others to whom we commend their example.

Let those members who have hitherto limited their attention to the Society to complaints because their too sanguine expectations have not been realized, *work for it*, or tell the Committee how they may increase its funds, or render it more useful. If they cannot work for it themselves, they should not discourage those who can and will, but pay the trifling amount of their annual membership fees, in cheerful reliance upon their zeal and integrity.

But all may help! The universe presents us with a system of co-operation in which the least and the humblest objects in creation as well as the greatest and the noblest find a place for themselves, and render a common service. The Committee urge the members of the Society to reflect upon their individual responsibility. The Society is organized, *not* that a few energetic men may work for all the rest, *but that all may work together for the common good.* If they will but exercise a moderate degree of patience, and each do what he can; if every one member will only add another member to the Society, or get one Subscriber to the Benevolent Fund; and thus, by little and little, increase the means and influence of the Society,—the incorporation of the trade will soon

be an accomplished fact; the Benevolent Fund will become a bond of happy union; the necessitous poor of the Society will bless their benevolent brethren, and the Institution will remain a glorious and lasting monument of success.

Dr. *General Statement of Receipt and Expenditure for the year* 1862. Cr.

	£	s.	d.		£	s.	d.
1862, January 1st.				1862, December 31st.			
To Balance, from last statement	15	8	0	By Printing, Advertisements, Stationery, Committee-rooms, Office Rent, Gas, Coals, &c. .	54	13	0
To Subscriptions, Donations, and Membership Fees, Town and Country	430	17	10	By Postages and Petty Expenses .	48	0	2
To Balance of ditto, per Country Agents	15	4	0	By Manager on account of Salary	72	10	4
				By Secretary ditto	47	7	8
				By Cost of Members' Certificates .	30	7	6
				By First Annual Dinner Expenses	21	13	6
				By Balance forward	186	17	8
	£461	9	10		£461	9	10

1863, January 1st.

By Balance forward			
Amount placed to credit of Benevolent Fund .	160	0	0
Cash in hand	26	17	8
	186	17	8

Examined and compared with the books and vouchers, and found correct.

THOMAS D'AUBREY, JOHN WADE, } *Auditors.*

QUININE SUBSTITUTES.*

A very interesting paper was lately read by Mr. Markham before the Society of Arts, on the "Introduction of Chinchona Plants into India." The facts contained in it lead us to suppose that the anticipated quinine famine will not be so severe as most people have appeared to think. At the same time, there is a period of at least ten years to pass through before we can hope to obtain chinchona barks in any quantity from their new country. Bark merchants shake their heads and sigh dolefully when they are questioned about the prospects of the bark trade during the next decade. The mischief that would result from a bark famine, not merely to our colonies, but to our hospitals and dispensaries at home, is fearful to think of. As it is, Dr. Chambers assures us that many institutions have been compelled to discontinue the use of quinine altogether, on account of its dearness. At the same time, the Registrar-General tells us that febrile maladies are on the increase. What, then, is to be done? Looking at the matter from a scientific point of view, there appear to be three remedies applicable to the case:—1. The use of the salts of chinchona. 2. The discovery of the method of making quinine artificially. 3. The successful substitution of this febrifuge by some other organic compound, natural or artificial.

The first remedy is perfectly applicable for the present only. Our largest chinchona alkaloid manufacturers, Messrs. Howards, introduced the hydrochlorate of chinchonine to the medical profession at the late International Exhibition at a comparatively low price, and, in spite of the well-known conservative principles of certain members of that body, they have since manufactured and distributed large quantities of this alkaloid and its salts over all parts of the world. But the low price of chinchonine cannot be expected to continue. Some years since, we recollect that the same firm introduced quinidine into the market at a low rate; but the demand soon rose above the supply, and quinidine went up nearly to the price of its brother, quinine. We fear greatly that the same thing will occur with the last valuable addition to our stock of febrifuge alkaloids. It is, however, a remedy for the present, and should be well tried and reported on by those who are competent to do so. The second remedy—the discovery of the method of forming quinine by synthesis—should be again sought for. In 1856, Mr. W. H. Perkin endeavoured to form this alkaloid artificially by oxidizing allyl-toluidine with bichromate of potash; but instead of discovering quinine, he discovered aniline purple, the mag-

* Extracted from the *Chemical News*.

nificent golden reflection of which so dazzled his eyes, that he naturally gave up his search for the healing alkaloid. Since that period neither the talented chemist just named, nor any other of our vast army of workers in organic chemistry, appears to have taken up the subject. The discovery of the third remedy seems to be closer at hand. Amongst the vast number of natural organic bases, how few are there that have received proper trials as to their therapeutic qualities! Phloridzin, esculin, salicin, and some half-dozen more, have been partially tried at various times, and are said, in certain pharmacological works, to be febrifuges; but we have little information about them that is to be relied on. All of them are, however, to be easily obtained and experimented upon. But the largest field open to the ambitious would-be discoverer of *the* substitute for quinine, seems to us to be amongst the innumerable artificial organic bases, acids, and neutral products that are being discovered daily in almost every laboratory in the world. The members of this vast group of substances that have received attention at the hands of therapeutists may be reckoned on the fingers of one hand. Propylamine has been experimented on by Avenarius, in Russia, and by Procter, in America, who state that it is a valuable curative agent in cases of chronic rheumatism. Picric acid has been tried as a febrifuge by Braconnot; but it dyed the unfortunate patients a brilliant yellow, and was consequently objected to by them. There is but little doubt that pharmacy generally would receive important benefits from the systematic study of some of these compounds; but our physicians are but seldom chemists, and our chemists are too fond of either purely scientific investigations, or of making researches into artificial dyeing materials. Surely we have dyes enough to go on with for a few years; and as to new compounds, we have not yet discovered the properties of a thousandth part of those whose names we glibly use every day. Far be it from us to take a utilitarian view of chemical research. But we must never forget, while admiring as we do the magnificent discoveries in pure chemistry that are taking place daily, that one of the noblest aims of our glorious science is the discovery of substances that may administer to the wants and enjoyments of our fellows that may bring health and ease to the writhing sufferer, or that may restore the dying patient to life and strength.

The experience of the last ten years has shown that therapeutists are fully alive to the importance of practising their art on scientific principles; let them now, therefore, show their proper appreciation of the truths of chemical science by aiding their chemical brethren in testing to the utmost some few, at least, of the organic products formed in the laboratory. At first, no doubt, the work would be purely experimental, but gradually the experience gained would soon show from what class of products successful results might be expected. While botanists are ransacking the fields and forests of the world in search of new remedies, it will be surely a disgrace to the scientific chemist if no results are obtained from the use of substances of more definite composition which may easily replace the thousand and one medicaments with pseudo-scientific names, so puffed and advertised in every direction.

JEANRENAUD'S PHOTOGRAPHIC COLLODION.

The *American Journal of Science* translates from *Le Moniteur de la Photographie* for February 15th, 1863, the following letter addressed to the Editor by A. Jeanrenaud M. Jeanrenaud is a well-known skilful amateur photographer:—

"Mr. Editor,—If you and several other gentlemen had not requested of me the formula for the collodion I use, I should perhaps never have determined to publish it. In general, each photographer has his own special process, so that it may be said that there are as many formulas for collodion as there are operators; but, since you judge, from the results I have obtained, that it will be useful to make my formula known to your readers, I do it with the more pleasure, as I hope that those who shall take the pains to try it will have no reason to regret it. This formula is less empirical than it seems, for it is the result of a long series of researches and trials, concerning which it would be useless to dilate. Such as it is, it is *good*, and has given me for several years very constant results; and I may add, that, unlike other collodions, time has upon it no other influence than to improve it, which has determined me always to have a supply a year old on hand.

Formula.

For one litre of collodion		=	35½ fluid ounces.
Ether at 62°	800 grammes,		28½ ,,
Alcohol at 40°	250 ,,		8·8 ,,
Very soluble gun cotton	8 ,,		123 grains.
Iodide of cadmium	9 ,,		139 ,,

"Upon complete solution, twenty-five drops of pure bromine are added. The colour becomes very intense, for there is some iodine set free, and a consequent formation of bromide of cadmium. From this litre I extract 100 grammes—one-tenth part of the whole quantity—which I place in a separate flask. Into this 100 grammes are dropped twelve or thirteen drops of highly concentrated liquid ammonia. A very thick golden-yellow precipitate is formed, so thick that it will not mingle with the supernatant liquid even by vigorously shaking the flask. It is not easy to define with chemical exactness the constitution of this precipitate; but what is certain is, that it suffices to add to it a few drops of crystallizable acetic acid to dissolve it and render the collodion perfectly limpid. This last operation with acetic acid is somewhat uncertain, as the quantity varies according to the quality of the alcohol and ammonia used. I now pour back into the first flask the 100 grammes upon which I have just operated, and let the whole stand for fifteen days before using it. During this time the collodion, however red it may be, changes gradually until it attains at last a pale straw-colour, which tint it ought to keep. If the collodion is found to be insufficiently iodized (although the proportions above given ought to be quite sufficient), I ought to say that it would not be proper to add the iodide of cadmium directly, or the collodion will become cloudy and cannot be cleared by filtration. It is necessary to dissolve the iodide first in a small quantity of collodion separately, and mix afterwards. In conclusion, the collodion contains iodides, bromides, and acetates. It may happen, and it does happen in fact, that it forms in the negative bath small crystals of acetate of silver. I have never had any reason to complain of this; on the contrary, I think it is to the reaction which produces them that we must attribute the good qualities of this collodion."

ON THE PREPARATION AND USE OF CRYSTALLIZED HYPOSULPHITE OF LIME.

M. J. Laneau, the Pharmacien in chief of the Hospital of St. John, in a communication to the *Journal de Chimie Médicale*, speaks of the recent suggestions of Dr. Polli, of Milan, and Dr. Jansses, of Brussels, in reference to the use of hyposulphites in diseases due to a morbid ferment. The latter physician has continued the remarkable observations of his Milanese *confrère* in a pharmaceutical direction, by the aid of M. Laneau, who gives the processes he used.

Hyposulphite of Lime.

Take of Flowers of Sulphur	1,000 parts.
Quicklime	400 ,,
Rain-water	4,000 ,,

Slack the lime with sufficient of the water, add the sulphur and the remainder of the water, and boil the mixture during an hour and a half, adding water to preserve the measure; then, when cool, filter through white linen on which a double sheet of filtering paper has been spread, and wash the residue with 1,000 parts of water, by which a solution of polysulphide of calcium of sp. gr. 1·141 is obtained. Into this a current of washed sulphurous acid gas is passed by means of a suitable apparatus until the solution is decolorized; the excess of sulphur which has been precipitated, when washed and dried, may be used as precipitated sulphur. The clear solution of hyposulphite of lime is now to be carefully evaporated by a heat not exceeding 140° Fahr. (otherwise the salt will be decomposed) until it commences to crystallize, when the solution is set aside. The yield is 700 parts of hyposulphite of lime in hexihedral crystals, which effloresce in dry air.

M. Laneau also prepares hyposulphite of lime from the *sulphite* of lime by digesting at a temperature between 120° and 140° Fahr. 150 grammes of sulphite of lime, 40 grammes of washed sulphur, and 500 grammes of distilled water during twenty-four hours, or more, if necessary, and then filter and proceed as before.

Pure hyposulphite of lime may be mixed with powdered sugar and aromatics without change. The mixture retains its dry state even in a humid air; but the author thinks sugar of milk, on the whole, is a better excipient for the administration of this salt in powder.

M. Laneau has made various pharmaceutical mixtures of the *hypophosphites* of lime and soda with hyposulphite of lime and sugar without any apparent chemical change occurring, and he believes that these salts may be used together if required in tubercular disease. The following formulæ are offered:—

Syrup of Hyposulphite of Lime.

Take of	Crystallized Hyposulphite of Lime . .	10 grammes.
	Distilled Water	20 ,,
	Syrup of Orange Flowers	170 ,,

Dissolve the salt in the water, and mix with the syrup.

This syrup has a cool and agreeable taste; its bitterness is slight and easily masked by aromatics, and it keeps a long time.

Tablet of Hyposulphite of Lime.

Take of	Hyposulphite of Lime . . .	10·0 grammes.
	Gum Tragacanth	1·0 ,,
	White Sugar	188·8 ,,
	Essence of Neroli or Mint . .	10 drops.

Mix the powders, make a mass with q. s. water and the essence, and divide into tablets of one gramme each.

SUBSTANCES WHICH SHOULD NEITHER BE HEATED NOR MELTED IN PLATINUM CRUCIBLES.

According to Dr. Hager (*Journ. de Pharm.* and *Amer. Journ. of Pharm.*), the following operations cannot be performed:—

1st. The fusion of alkaline sulphurets, as well as the reduction by charcoal of sulphates of the alkalies and alkaline earths.

2nd. All operations which produce the disengagement of chlorine, bromine, iodine, and fluorine; consequently it cannot be used for aqua regia.

3rd. All operations which involve the separation of silicic acid, which at a red heat acts on platinum and renders it brittle.

4th. The fusion or heating of nitrates, especially those of the alkalies and alkaline earths.

5th. The heating to redness of the caustic alkalies and alkaline earths.

6th. The fusion of metals, especially those very fusible, as lead, bismuth, tin and cadmium, and particularly when a red heat is used to reduce metallic oxides.

7th. Heating to whiteness metallic oxides, which give up oxygen at a high temperature; as, for example, the oxides of lead, bismuth, nickel, copper, &c.

8th. The heating of phosphoric acid and the acid phosphates with carbon or other deoxidizing agents, because of the tendency to eliminate phosphorus, which acts on the platinum.

FERRO-PHOSPHORATED ELIXIR OF CALISAYA.

A preparation under the above title has been introduced to the notice of the profession in America, and having met with some favour, various inquiries have been made for a formula. Mr. W. C. Bakes* submits the following as yielding an eligible preparation:—

Take of Pyrophosphate of Iron . . .	121 grains.
Extract of Calisaya Bark . . .	24 ,,
Sugar	4 ounces.
Water	2 fluid ounces.
Tinct. Fresh Orange Peel . .	1 ,, ounce.
Sherry Wine	11 ,, ounces.

Triturate the three first ingredients in a mortar, add the water, and when dissolved, the other ingredients; lastly, filter through paper.

WINE OF CITRATE OF IRON AND QUININE.

For want of a uniform recipe this preparation often differs with different establishments, and to obviate this difficulty Mr. Bakes† suggests a formula which yields an article having a pleasant flavour, and each teaspoonful containing three grains of the salt:—

Take of Citrate of Iron and Quinine . .	6 drachms and 24 grs.
Sugar	4 ounces.
Water	1 fluid ounce.
Tinct. Fresh Orange Peel . . .	2 ,, ounces.
Sherry Wine	11 ,, ,,

Dissolve the citrate of iron and quinine and the sugar in the water, add the other ingredients and filter through paper.

NEW FORM OF DRY PERSULPHATE OF IRON.

Dr. J. Lawrence Smith, of the Louisville Chemical Works, has made the following communication to the *American Journal of Pharmacy*:—

The use of the persulphate of iron has been very much extended in the last few years, and various formulæ have been proposed for making it, all of which are very good. But it is not in forming the solution that there is anything needed, but it is the transformation of it into a solid that is most desired. Some have dried it on plates in a hot-chamber, and others have dried it by the direct application of heat, giving it a porous structure not unlike tannic acid when first dried. I have given to it these forms successively, but they all have objections. Heated on plates, if the temperature be too light, or continued too great a length of time, a portion becomes insoluble; other forms are deliquescent, and soon become moist in contact with the air. Having succeeded in drying it into an almost impalpable powder unalterable in contact with air, and very soluble in water, I propose describing, as near as possible, the method by which this is arrived at. As regards the solution of persulphate I am not very particular about the formula, preferring, however, one proposed for Monsel's persulphate—

Sulphate Iron	100 troy ounces
Distilled Water	2 gallons
Sulphuric Acid	5 troy ounces
Nitric Acid	5 troy oz., or q. s.—

* *American Journal of Pharmacy.* † Ibid.

for peroxidizing the iron, when the whole is brought to the boiling temperature. The manner of doing this is familiar to all operators. The solution is allowed to cool somewhat, then filtered and concentrated to a density of 1·60. It is now allowed to cool, and poured into shallow plates to the depth of one-sixteenth or one-fourth of an inch, and a little of the dry powder obtained from a previous desiccation is scattered on the surface of the liquid in each plate. The plates are then placed on shelves in a part of the laboratory where a little steam is escaping, and the temperature is from 75° to 100° Fahr., according to the season.

In my works, shelves are constructed two or three feet above a series of steam jackets in which live steam is used, and always more or less escaping from the sides of the jackets. In from twenty-four to forty-eight hours the contents of each plate begin to rise in cauliflower excrescences, that after a little longer exposure become dry, and rub down between the fingers to an impalpable powder; and when rubbed down and passed through a tolerably fine iron sieve, has very much the appearance of mustard. It can be exposed to the air without its absorbing moisture or undergoing any alteration. When thrown into water, the water becomes turbid, but in a few moments clears up, affording a red solution. It is soluble in a very small quantity of water. When it is desired to use it in the solid form as a styptic, it can be taken in the fingers and scattered on the wound or other surface as any other powder may be applied. This manner of drying a substance considered deliquescent doubtless appears a very singular one, and it certainly was not suggested by any train of reasoning, but discovered altogether by accident; and I have tried to bring about the result by other arrangements, but the solution placed on shelves in the same room not more than ten feet off, but not exactly under the same condition of vapour and temperature, acts entirely differently: the solution, instead of drying, becomes more dilute from absorption of moisture. In the drying-room proper, it solidifies into a hard mass.

REVIEWS

A Manual of Chemical Analysis, Qualitative and Quantitative. For the use of Students. Part I. Qualitative. By HENRY M. NOAD, Ph.D., F.R.S., F.C.S., &c. Lovell Reeve and Co. 6*s*.

STUDENTS of Analytical Chemistry could not wish for a better master than Dr. Noad, the accomplished lecturer and writer. His descriptions and explanations are always clear and complete, and the methods he proposes are those which are adopted by the leading analysts. We need not question the correctness of Dr. Noad's statements, for, unlike those of many popular scientific writers, they rest on the solid foundation of practical experience. The work now before us is really a manual; that is to say, "a small book, such as may be carried in the hand or conveniently handled." It contains upwards of 200 pages, and numerous woodcuts representing apparatus. The first chapter treats of the operations to be performed in Qualitative Analysis (solution, precipitation, filtration, &c.), and the apparatus required. Considerable space is devoted to a description of Mr. Griffin's simple gas-burner and fittings, by the aid of which so many operations of the laboratory can be conviently performed.* In the second chapter the author describes the preparation and uses of the most important reagents, or those bodies which are employed by the Chemist to give him information as to the nature of the subject of his examinations. The third chapter is on the comportment of the principal metallic oxides with reagents; the fourth, on the comportment of the principal inorganic and organic acids; the fifth, on the comportment of the principal alkaloids; and the sixth and last, on Systematic Qualitative Analysis. We cannot point to any novel

* See Vol. II. of our Journal, p. 45.

feature in this manual; indeed, we should be sorry if we could, for the great value of the work consists in its perfect accordance with the methodical system now generally adopted by analysts. It is a clear, concise and cheap handbook, and we can strongly recommend it to all who are desirous of going through a practical course of Qualitative Analysis. We are anxious to see the second part, which will treat of Quantitative Analysis.

A Dictionary of Chemistry, &c. By HENRY WATTS, B.A., F.C.S. Part IV. Benzylene—Carbon. Longmans. 5s.

By merely glancing at the titles of the articles in this part we get some idea of the vast extent of that department of knowledge which Mr. Watts has undertaken to survey and describe. We are reminded of the relation which Chemistry bears to Physiology by the long articles on Bile, Blood, and Bone. The technological aspect of the science is manifested by the articles on Bleaching, Bone Black, Brazil Wood, Bricks, Caoutchouc, and Caramel. Dr. Atkinson's paper on Bismuth tells of the connexion between Chemistry and Metallurgy. Then again, when, we run over the titles "Bergamot," "Bitter Almond Oil," "Cajeput Oil," "Butyric Ether," "Camphor," "Cantharides," "Berberine," "Brucine," "Brandy," "Bread" "Butter," and "Cacao," we think of the flood of light which Chemistry has poured upon Medicines, Perfumes, Poisons, and Articles of Food.

The present number contains papers on five of the elements, namely, Bismuth, Boron, Bromine, Cadmium, and Calcium. In the article "Blowpipe" there is an excellent table showing the behaviour of metallic oxides with microcosmic salt and borax.

The following extract from the long and interesting treatise on Bread and Bread-making gives much valuable information respecting the use of

ALUM IN BREAD.

"The injurious action of diastase, &c., on starch in the process of bread-making, may be prevented by the addition of certain mineral substances. Alum has long been employed for this purpose by bakers, and it certainly has the effect of rendering available for bread-making many qualities of flour, which must otherwise be wasted. Dr. Odling says: 'If we mix a solution of starch with infusion of malt, in the course of a few minutes only, the starch can no longer be detected, being completely converted into dextrin and sugar; but the addition of a very small quantity of alum prevents altogether or greatly retards the transformation. The action of diastase on undissolved starch is very gradual, but here also the interference of the alum is easily recognisable. Bread made with infusion of bran or infusion of malt is very sweet, sodden, brown-coloured, and so sticky as almost to bind the jaws together during mastication. But the addition of alum to the dough causes the loaves to be white, dry, elastic, crumbly, and unobjectionable both as to taste and appearance. I have found that flour which is of itself so glucogenic as to yield bread undistinguishable from that made with infusion of malt, could by the addition of alum be made to furnish a white, dry, eatable loaf.'

"Alum is also said to prevent bread from turning sour and mouldy. The sourness often observed in bread of inferior quality, arises from the conversion of part of the starch into lactic acid. Now, as alum prevents the transformation of starch, it may be expected also to interfere with the production of lactic acid.

"Considerable discussion has taken place as to the probable effects of the habitual use of alumed bread on the digestive functions, some medical men asserting that alum unless taken in much larger quantity than is likely to occur in bread is quite harmless, while others attribute to it the most injurious effects. In this, as in many cases, the truth probably lies in the middle. Many of the statements which have been put forth on this, as on other questions relating to the adulteration of food, are doubtless grossly exaggerated; nevertheless it would be unsafe to assert that the use of alumed bread is quite free from objection. Dr. Dauglish says:—'Its effect on the system is that of a topical astringent on the surface of the alimentary canal, producing constipation, and deranging the process of absorption. But its action in neutralising the efficacy of the digestive solvents is by far the most important and unquestionable. The very purpose for which it is used by the baker, is the prevention of those early stages of solution which spoil the colour and the lightness of the bread whilst it is being prepared, and which it does most effectually: but it also does more than needed; for whilst it prevents solution at a time that is not desirable, it also continues its effects when taken into the stomach, and the consequence is, that a large portion of the gluten and other valuable

constituents of the flour are never properly dissolved, but pass through the alimentary canal without affording any nourishment whatever.'

"Another objection made against the use of alum, viz., that it has the power of causing the bread to retain a larger proportion of water than it otherwise would, so that bakers who use alum defraud their customers by selling water instead of bread, does not appear to rest on satisfactory evidence. Odling examined the new crumb of eighteen alumed and seven non-alumed loaves, and found that the former contained on the average 43·68 per cent., and the latter 42·78 per cent. water, the difference being quite insignificant as compared with the differences between the individual loaves whether alumed or not."

We have included a few extracts from this part among our "Notes and Queries."

ACCIDENTS.

A LADY ACCIDENTALLY POISONED BY "SIR W. BURNETT'S DISINFECTING FLUID."

A fatal case of accidental poisoning occurred during the month at the hamlet of Rusthall, near Tunbridge-wells. The deceased, Maria Frances Jane Wood, was the wife of Captain T. P. Wood, late of the 29th Regiment. It appeared by the evidence adduced at the inquest, that the deceased, who had recently been confined, had been accustomed to take occasional draughts of "Dinneford's pure fluid magnesia," a bottle of which was kept upon a shelf in Mrs. Wood's dressing-room, in which the maid and the baby slept. On the morning of Saturday, the 23rd ult., about five o'clock, the maid, having been requested by her mistress over-night, took down from the shelf what she supposed to be a bottle of magnesia, and, pouring out three-quarters of a wine glassful, took it to her mistress, who drank it. Mrs. Wood felt a burning sensation, and asked her maid to fetch the bottle out of which she had taken the liquid. The maid then discovered that she had administered to her mistress a quantity of "Sir William Burnett's disinfecting fluid" (chloride of zinc). Mrs. Wood, immediately she ascertained the sad mistake, took a large dose of castor oil, and Dr. Johnson, who arrived as speedily as possible after he received information of the accident, administered a mixture of milk, oil, and eggs, and afterwards employed the stomach-pump. The unfortunate lady, however, never rallied from the violent shock to her nervous system, and died about midnight on Sunday. It transpired during the inquiry that the bottle of disinfecting fluid had been used by the monthly nurse during the confinement of the deceased, and that she had left it on the same shelf as the fluid magnesia. In the meantime the maid had not administered any medicine to her mistress, and, being unaware that the bottle was on the shelf beside the magnesia, seized it in the hurry of the moment. Glancing at the label, she saw the word "fluid," and thought it was a bottle of magnesia which she had used previously to the confinement of her mistress. It was singularly unfortunate that the two bottles were alike in size and form, and in the colour both of the glass and liquid. The label on both was large, and the word "fluid" was in a prominent line. The bottle of disinfecting fluid, however, was fluted at the back, denoting that it contained poison, though the word "poison" was not printed upon it. The maid was described as a very kind and attentive servant to her mistress, who fully exonerated her from blame, and expressed a hope, when death was approaching, that she would continue to take charge of the infant, and be as attentive to Captain Wood (who has become totally blind from the effects of an accident sustained in military service) as she had previously been; and Captain Wood expressed himself in similar terms. The jury returned the following verdict:—"That the deceased died from the effects of a dose of Sir William Burnett's disinfecting fluid, accidentally given for a dose of Dinneford's fluid magnesia; and the jury cannot separate without expressing their strong disapprobation that a mixture of such a poisonous nature as the former should be sold without the bottle being legibly labelled with the word 'poison,' and they request the coroner to communicate with the agents for the fluid accordingly."

GREAT FIRE IN CORK.—DESTRUCTION OF THE WAREHOUSES OF MESSRS. GOULDING.

A most destructive fire broke out last Wednesday morning, about two o'clock, in the establishment of Messrs. Goulding, oil and drug merchants, 108, Patrick-street. About half-past two, tier after tier fell in, followed by the roof, with a tremendous crash, when

the doomed house presented the appearance of and roared like a huge furnace. By six o'clock nothing remained of this fine establishment but a smouldering heap of ruins. The house of Mr. Russell, next door, was almost destroyed. The *Cork Examiner* of Wednesday evening understands that the premises of Messrs. Goulding were insured in the Globe, the Imperial, and the London and Liverpool Insurance Companies' offices to the extent of about £6,500; but it is said £8,000 will not cover the loss.

ACCIDENTAL DEATH OF A HERBALIST.

A fatal accident occurred on the Midland Railway near Chilwell, five miles from Nottingham, on Friday afternoon (June 5). At the time in question an old man named Samuel Plumb, aged seventy-seven, was crossing the railway at Chilwell, to which place he had gone to gather herbs that he was in the habit of selling to chemists, when the 3.55 p.m. express train from London came up at full speed. He was seen by the engine driver upon the line, but to stop the train in time to prevent the accident was impossible. The whistle was blown, but the old man did not hear it and he was knocked down and killed instantly. His body was frightfully mutilated.

OBITUARY.

MR. WESTERN WOOD, M.P.

It is our painful duty to record the death of that benevolent gentleman who so recently presided at the festival of the United Society of Chemists and Druggists. Mr. Western Wood, member of Parliament for the City of London, expired at half-past 9 o'clock on Sunday morning (May 17th), at his residence, North Cray Place, Kent. He was attacked early in the previous week by inflammation of both lungs, accompanied by pleurisy, which baffled all the skill of his medical attendants. The deceased gentleman was the youngest son of the late Alderman Sir Matthew Wood, Bart., who represented the City of London in Parliament for 28 years. Mr. Wood was returned in July 1861. In July and August, 1862, Mr. Wood endeavoured to obtain for the general body of Chemists and Druggists an exemption from service upon juries. At the Festival in April last, he made an eloquent appeal on behalf of the poor connected with our trade, and set the good example of contributing a handsome sum to the fund for increasing which the meeting was held.

DR. DAVID BOSWELL REID.

All practical chemists will learn with regret the death of Dr. David Boswell Reid, well known by his labours in regard to ventilation. Dr. Reid, who had been for some years in America, died at Washington on the 5th of April. The death was sudden, and caused by congestion of the lungs. Dr. Reid had been appointed by the Government Medical Inspector to the Sanitary Commission, and he was about to leave Washington, to be employed in ventilating the new military hospitals which have been erected in different parts of the country. Dr. Reid was a native of Edinburgh, grandson of the celebrated Hugo Arnot, the historian of Edinburgh, and was himself at one time an extensively employed and successful teacher of chemistry here. His connexion with the ventilation of the Houses of Parliament is but too well known. He ventilated St. George's Hall, Liverpool—the only building in the world, he said, in which his principles of ventilation have been completely carried out. The ventilation of this building is considered very successful. Dr. Reid began his public career in Edinburgh as assistant to the late Dr. Hope, Professor of Chemistry in the University. He was also a candidate for the Chair when Dr. Hope resigned.

GENERAL NEWS.

UNITED SOCIETY OF CHEMISTS AND DRUGGISTS.—THE LATE MR. WESTERN WOOD, M.P.

At the usual monthly meeting, the following was unanimously adopted:—

"That the Executive Committee of the United Society of Chemists and Druggists, at their first meeting after the lamented death of Mr. Western Wood, M.P., offer their most respectful condolence to his family, and beg to express their sincere and grateful appreciation of the courtesy, unremitting attention, and great assistance they received from him during the efforts made by the Society to obtain exemption from Jury service for all Dispensing Chemists. They also desire to record their affectionate remembrance of his kind and able presidency at their recent Annual Festival."

The Annual Report of the United Society will be found on another page.

LEEDS CHEMISTS' ASSOCIATION.—POISONED GRAIN BILL.—DECIMAL WEIGHTS AND MEASURES BILL.

A special meeting of the members was held at their Library, 5, Cookridge-street, on Monday evening; the president, Mr. Harvey, in the chair. The object of the meeting

was to consider two bills now before the House of Commons, and to express the opinion of the members upon them. The following petition was offered for adoption :—

"That a bill now before your Honourable House, entitled 'The Poisoned Grain Prohibition Act,' will interfere with the trade of your petitioners, and be likely to expose them to vexatious prosecutions. That in the belief of your petitioners no sufficient grounds exist for the provisions of this bill, which entirely prohibits, under heavy pecuniary penalties, the use of arsenic for the preparation of seed-wheat, and of other poisons which experience has shown to be necessary for the protection of agriculture. That the clause in the bill permitting the use of poisons to destroy vermin is so framed as to be still to a large extent prohibitive.

"That a bill interfering with trade and making illegal means heretofore deemed necessary for agricultural and other useful objects ought not to pass, except on grounds of evident and urgent necessity; and as your petitioners believe no facts have been or can be stated to show this necessity, they beseech your Honourable House not to pass the said bill into a law."

The petition was moved by Mr. Smeeton, seconded by Mr. Haigh, and adopted after a full discussion, in which Messrs. Stead, Horsfield, Yewdall, and Rimmington (Bradford) took part, and in which the loosely-drawn nature of the bill was severely commented upon, since it neither defined the poisons which it prohibited nor the "vermin" against which they were allowed to be used. The Association next considered the following draft of a petition :—

"That your petitioners pray that the bill now before your Honourable House for decimalising weights and measures may be passed into a law.

"That further, should such bill not be passed in its entirety, your petitioners pray that its provisions may become law so far as relates to the compounding of medicines and all the operations of pharmacy."

Moved by Mr. Thompson, seconded by Mr. Brown, and carried. It was also resolved—

"That this Association would respectfully urge upon the General Medical Council that the present opportunity of introducing metric weights and measures into the forthcoming National Pharmacopœia should be embraced."

Moved by Mr. Reynolds, seconded by Mr. R. M. Atkinson. The course adopted by the Association with regard to the Decimal Weights and Measures Bill appears to indicate the direction of a judicious policy in connexion with this subject. Much unthinking opposition will doubtless be raised to the general adoption of the measure ; and in order that a preliminary trial of the system may be made, it would be an immense advantage that a special purpose like the compounding of medicines, requiring definiteness and accuracy, should be selected. The decimal system has long been adopted for the purposes of science, for which its accuracy and facility peculiarly fit it.

CONVERSAZIONE OF THE PHARMACEUTICAL SOCIETY.

A conversazione was held at the Society's house in Bloomsbury-square on Tuesday evening, the 19th ult. The visitors, with members and associates of the Society, formed a goodly company, and all seemed to appreciate thoroughly the preparations which had been made for their reception. Nothing was wanting to make the meeting a pleasant one. The beautiful and curious objects kindly contributed for exhibition in the different rooms were unusually numerous. The following account of them from the Society's *Journal* is more complete than any we could prepare from our own hurried notes :—

"Several valuable pictures and engravings from Messrs. Vokins, Mr. Hills, and Mr. Bird ; some handsome busts, statues, and statuettes from Mr. Copeland, Mr. T. Butler, and Mr. Brucciani ; bronzes from Messrs. Jackson and Graham ; specimens of Majolica ware from Mr. Phillips ; and two cases of stuffed birds from Mr. Leadbeater.

"Some Japanese articles from Messrs. Farmer and Rogers ; a collection of corals, enamels, etc. from Messrs. Phillips Brothers ; specimens of Indian art from the Royal Asiatic Society ; and some wood-carvings and objects, illustrating recent discoveries at Jerusalem, from Miss Rogers.

"Some curious pictures from Mr. Cabrera ; photographs from Professor Busk and Mr. Palmer ; articles of virtù from Captain Shea ; and designs for artistic paper-hangings, etc. from Messrs. Green and King ; a large collection of articles in aluminium and aluminium bronze from Messrs. Mappin Brothers ; a specimen of wood perforated by the teredo from Mr. Hills ; and maps of the occurrence of fogs, and diagrams of sound-trumpets, from Dr. Gladstone. Senor Gallejos showed his ingenious artificial arm and hand, and exhibited its capabilities ; and Mr. King exhibited some aquaria and fish-spawn.

"There was a large number of medical and other plants from the Royal Botanic Society's garden ; a specimen of the living plant of the Calabar Ordeal Bean from

Mr. Daniel Hanbury; manna products from Mr. M. C. Cooke; specimens illustrating the production of opium from the Indian Museum; and a specimen of anchusine and leech cocoons from Mr. Allchin. Also specimens of New Zealand sarsaparilla, flax, etc. from Mr. Keating; various silk cocoons, cloth from the inner bark of trees, and other illustrations of vegetable structure, from Mr. P. L. Simmonds; a fine collection of the silk-producing moths of India from Mr. Moore; and some preserved ferns and seaweeds from Mr. Jardine.

"A bar of thallium, weighing half a pound, was contributed by Mr. Crookes; specimens of sulphur by Mr. Hills, of Deptford; and a case of specimens of the rare metals, etc., including metallic chromium, manganese, molybdenum, and lithium, as well as the three allotropic varieties of boron and silicon, by Mr. T. B. Redwood; salts of platinum, etc. by Messrs. Johnson and Matthey; improved poison-bottles by Mr. Toogood; and chemicals by Messrs. Johnson and Sons; a good collection of minerals by Mr. B. M. Wright, and another by Mr. Gregory; a specimen of the turtle stone by Mr. Tennant; flint and flint-implements by Mr. Squire; and a case of minerals and woods by Mr. Baldock, who also exhibited a microscope. George IV.'s medicine chest by Mr. Bourdas; chemical apparatus in stoneware by Messrs. Cliff and Son; a gas-regulator by Mr. Duckham; models of crystals by Mr. Larkin; some spirit lamps, etc. by Mr. Mills; and specimens of Parhydor, or impermeable silk, by Messrs. Maw and Son.

"Aneroid barometers by Messrs. Spencer, Browning, and Co.; an improved barometer by Mr. Symons; telescopes and a telescope stand by Messrs. Horne and Thornthwaite (who also exhibited the crystallization of thallium); some improved thermometers by Mr. Casella; and some articles in vulcanite by Mr. Silver.

"There was a magneto-electric machine from Mr. A. Davis (Sheffield); an improved ventilating apparatus from Mr. M'Kinnell; a powerful air-pump, etc. from Mr. Griffin; and a blow-pipe chest, electrotypes, &c. from Mr. How. There was also a good show of microscopes from Messrs. Ross, Murray and Heath, How, Horne and Thornthwaite, Powell and Lealand, and Ladd, who also exhibited the spectrum of thallium. In one of the rooms Mr. Atkinson showed experiments with his large induction coil; and in another Mr. Charles Jones exhibited his photographic dissolving views.

"A working model of the pneumatic dispatch from the Polytechnic Institution was shown in the laboratories; and Carey Lea's constant aspirator, recently described in the *Chemical News*, was exhibited in operation by Mr. T. B. Redwood. This consists merely of a tube (which may be of zinc or tin) about two feet long and $\frac{4}{10}$ inch internal diameter, with a branch of the same material $\frac{3}{10}$ inch in diameter and four inches long, inserted horizontally at a distance of four inches from the upper end. When required for use it is supported in any convenient manner over a sink; an india-rubber tube communicating with the tap of a water-cistern being attached to the horizontal branch, and the upper end of the long tube being made to communicate with the vessel through which it is desired to pass a current of air.

"On turning the tap, a current of water is established through the horizontal branch and down the long tube, which (acting as a sort of piston) draws air in at the upper end of the tube, or through whatever apparatus it may be connected with; the air subsequently escaping with the water at the lower end of the long tube.

"The whole apparatus may be easily made by the operator himself. A stout cork is bored parallel to its axis, and rather on one side of the centre; and then a smaller hole is made at right angles to the first, communicating with it, but not passing further. Three pieces of tube (which may be of glass) are then fitted into the cork, not allowing either to extend as far in as the junction. The cork is then brushed over with a solution of sealing-wax in alcohol."

QUININE IN INDIA.

Mr. Clement R. Markham has addressed the following letter to a contemporary:—

"Sir,—As great numbers of persons are watching with deep interest the progress o the experimental cultivation of quinine-yielding chinchona trees in India, I should feel obliged if you would make public the important and gratifying fact that quinine and other febrifuge alkaloids have already been extracted from bark grown in India.

"Specimens of bark of only two years' growth have been forwarded from the Neilgherry hills, and analysed by Mr. Howard with most satisfactory results. He obtained crystallizations of very white sulphate of quinine, as well as chinchonidine and chinchonine, and the percentage product of alkaloids is as great as would be met with in South America."

FACTITIOUS SPIRITS AND IMPURE SUGAR.

Dr. Cameron, "Public Analyst" to the city of Dublin, having been employed by the South Dublin Board of Guardians to examine the brandy and sugar supplied to

the workhouse, has sent in a startling report. The so-called French brandy he found to be a spurious article, consisting of spirits of wine, flavoured with some such fruit as prunes, and coloured with burnt sugar. The sugar he found extremely damp, containing a very large proportion of treacle, and a considerable amount of such impurities as sporules of fungus, particles of cane, albumen, and starch granules. It contained also in great abundance a species of acarus or mite, closely resembling in appearance and nature the insect which, by burrowing in the skin, produces itch. "It is no exaggeration," says Dr. Cameron, "to affirm that there cannot be less than 100,000 of these insects in every pound of sugar. In ten grains weight I estimated 500, most of which were so large as to be distinctly visible to the naked eye." Such sugar is not only detrimental to health, but the least economical kind that can be employed, from its defective sweetening power. On the motion of Alderman Bonsell, seconded by Mr. Calbeck, it was unanimously resolved that the contractors should be prosecuted.

THE PHARMACEUTICAL SOCIETY AND THE POISONED GRAIN BILL.

A Special Meeting of the Council was held on the 13th ult., when it was resolved that the following petition be presented to the Commons:—

"The Petition of the Council of the Pharmaceutical Society of Great Britain humbly showeth—

"That your petitioners have seen with surprise and alarm a bill now before your Honourable House, entitled 'A Bill to prohibit the Sale and Use of Poisoned Grain in certain cases.'

"That the provisions of this bill extend far beyond the objects and purposes expressed in its title, and would materially interfere with your petitioners and others in the ordinary exercise of their business, and inconvenience the public generally.

"That the bill prohibits not only the sale of poisoned grain, but of 'any poison or poisonous ingredient' 'to be used for the purpose of injuring or destroying any birds or animals.'

"That this bill is probably intended to prevent the destruction of small birds, but your petitioners humbly submit that in effect it will go much further, and render it penal to sell or use any poison for the destruction of rats, mice, or other vermin, or of any cat, dog, or other domestic animal, which it may be desirable to destroy speedily and easily: That it will also render the advantageous and now almost universally adopted process of dressing seed-wheat (prior to sowing) with poisonous salts for the prevention of smut, at all times liable to penal misconstruction.

"Wherefore your petitioners humbly pray that your Honourable House will so modify the said bill as to prevent the injury and inconvenience they have hereby endeavoured to set forth.

"And your petitioners, as in duy bound, will ever pray."

GOSSIP.

At an examination meeting in the Court of Bankruptcy on the 3rd inst., the following amusing dialogue took place between the commissioner and the bankrupt:—C.—You have neglected to file the required accounts? B.—The omission has been occasioned by severe illness. C.—Have you a medical certificate of the illness? B.—No; but I have taken lots of boxes of pills, patent pills. C.—Have you been confined to your bed? B.—No, your honour; but the pills and the gout confined me to the house. C.—Well, it is a new reason for a bankrupt not being prepared with accounts that he has been swallowing a lot of quack pills. There must be an adjournment, I suppose.

Patrick C. Flannagan, a shopkeeper of Rochdale, has been fined in the mitigated penalty of £10 and costs, for selling arsenic unmixed with indigo.

A Congress of German naturalists and physicians is to be held this year at Stettin for the discussion of medical and scientific subjects. The proceedings commence on the 18th of September, under the presidency of Dr. Dohne and Dr. Behm.

A prospectus has been issued by the General Petroleum Company, with a capital of £200,000, in shares of £10, to carry on the business of an oil refinery and paraffin candle factory on an extensive scale.

A special general meeting of the members of the Pharmaceutical Society was held on the 10th inst., to consider the provisions of the Bill before the House of Commons for decimalizing the weights and measures, so far as relates to pharmaceutical preparations.

A prospectus has been issued of the "Wine Trade Review," a monthly periodical intended to represent the interests of the grocer wine dealers, and to assist the development of our trade in the light wines of all nations. It will be published in connection with the *Grocer*.

GAZETTE.

BANKRUPTS.

Barber, Henry Francis Collier, Jamaica-level, Bermondsey, saltpetre refiner.
Colwell, Henry, jun., Crawford-street and Mount-street, Grosvenor-square, trussmaker.
Collins, Alfred, Brewer-street, Regent-street, preparer of photographic papers.
Clode, Charles, Arbour-square, Stepney, chemist.
Hunter, Andrew George, and Edward Fiott Ferris, Mark-lane, and Landore, near Swansea, alkali manufacturers.

PARTNERSHIPS DISSOLVED.

Fay, J. C. and C., Kingsland-place, Kingsland-gate, chemists.
Vernon and Watts, Derby, and elsewhere, cork cutters.
Watts and Reichardt, Manchester, chemists.

Correspondence

UNITED SOCIETY OF CHEMISTS AND DRUGGISTS.

SIR,—I am instructed by the Committee of the Society to announce that their Annual Report is now being issued, and as it refers to a question of great importance, they will esteem it a favour if you will allow them to draw the attention of the whole of the members and the trade generally to it.

The annual membership fee of *5s.* (which can be sent in postage stamps) being now due, the Committee will feel obliged by those gentlemen who have not yet remitted it doing so. Members requiring the Society's certificate to send *1s.* extra.

I am, Sir,
Yours most obediently,
C. F. BUOTT,
2, Bell-yard, Secretary.
Doctors' Commons, E.C.

UNQUALIFIED ASSISTANTS.

SIR,—Gradation is a constituted element of society, and one of the vital principles of nations; consequently it cannot be in any way derogatory to the "*élite* of the trade" if they leave for a short time the perusal of articles on chemical investigation and discovery, to make the acquaintance of a very near relative, about whose mode of life I fear they know but little—I mean the country Druggist. To this end I invite your readers to accompany me into any small town, I care not where, and inspect the premises of the tradesman in question. He is one of those who cannot support himself by pharmacy, and consequently unites with it the grocery and provision trade. Drugs and chemicals hold but a secondary place to the rows of tea-canisters, or the piles of bacon and fish, and the barrels of butter and herrings, which adorn the shop of this descendant of Galen, whose work is, as may naturally be supposed, of the most varied kind. While here, perhaps, it would not be amiss to keep our aural organs on the alert, and listen to the wants of his customers.—Powder for a child for one; bacon and several articles of grocery for another; tea and sugar for somebody's "young un;" while a farm servant is in a great hurry to have "a drunch far a hoss that's a-got the gripes."

But it will not do to wait the next arrival, as there are other subjects which need our careful attention. Behind the counter are two lads, apprentices of the Chemist, veritable "young men from the country," who have lately left agriculture for the study of the Materia Medica; but their services are seldom required in the manipulation of physic, their time being chiefly occupied in the drudgery of the grocery business. These lads, I am sorry to say, are but the representatives of a great number who are bound by "parents and guardians," at a very early age, and with little education, to learn a trade which of all others should have the greatest amount of that qualification. And what chance have they for self-improvement, where from seven in the morning to nine or ten at night they must be at work, and very little of that work being in any way connected with our trade? But the advocates of self-culture will say, "Read after shop hours," and, we presume, give up a little of that time usually devoted to "Nature's sweet restorer."

But I can vouch from actual experience, that after being fourteen hours behind the counter, one feels more disposed to fill a "briar-root" and take a walk, than to fall asleep over the pages of either "Fownes" or "Bentley." In making these remarks, be it understood I say nothing against country Druggists, and am perfectly willing

to admit that in a small place, a mixture of trades is a necessary evil. But I do distinctly say that when boys are placed in the business, with little previous education, they should be allowed time to obtain, at least, all the knowledge at their command. I know in many places a prescription is seldom seen, and a practical knowledge of dispensing is, therefore, an impossibility; but there yet remain many things to be learnt, that are at present sadly neglected, and for which the leisure of a country business could afford ample time.

But if the master neglects his duty, the apprentice must be, indeed, fond of learning if he does not follow his example; and after an apprenticeship of five, six, or seven years, the future Chemist leaves, to acquire in a larger town what he should have learnt in his own.

Have I not here struck a chord which in its vibrations, produces anything but harmony? Is not this the key to the mysteries of unqualified assistants, and their consequent evils?

I fear in some degree this state of things must continue. The fact is, young men who have been favoured with a good education will not enter within the mysterious precincts of the country Druggist and Grocer, where they have to turn from the fractional division of poisonous drugs to retailing the commodities before mentioned. But trade in the country as well as in town must be kept afloat, and if qualified apprentices cannot be obtained, those whose parents can pay the best premiums are generally sought after, without regard to the amount of education they may possess. The consequence is, that individuals enter the trade who in after life correctly interpret that oft-quoted phrase, *ex nihilo nihil fit*. Need I, in the pages of your scientific journal, denounce such practices as unworthy a trade which claims to rank nearest the learned professions?

It certainly behoves all Chemists and Druggists, especially those in the country, to give this subject their careful consideration, so that the rising generation may not only be worthy descendants of the present, but far superior in their knowledge "of the substances and agents which are employed as remedies in the relief or cure of disease."

It remains, then, for those at present in trade to remedy the existing evil, and so in some measure remove one of the many blots which tarnish our escutcheon.

Yours faithfully, GAMMA.

SUGGESTED ALTERATION IN THE FORM OF OUR JOURNAL.

Manchester, June 11th, 1863.

DEAR SIR,—When the appeal to your readers for suggestions appeared at the close of last year, it occurred to me that the journal would be more handy and more useful if it appeared in another form. At that time I had no opportunity of obtaining the opinions of any of your subscribers, and being, like most men connected with the profession of Physic, remarkably modest, I did not venture to address you. I have since been in a position to learn the views of other subscribers to your excellent medium of communication, and have got all those I have spoken to on the subject to agree with me in thinking that the form of the *Lancet*, *Mechanics' Magazine*, *Grocer*, and other class journals, is far preferable to the dumpy octavo. I will not trouble you with my reasons for preferring the popular form, but will, perhaps, if you think proper to publish this, pursue the subject in a future number. Yours truly, W. W. J.

POISONED GRAIN BILL.

129, High-st., Guildford,
June 10, 1863.

SIR,—I beg to *protest* against the Poisoned Grain Bill now about to be brought into the House of Commons, as I consider it not only *unjust*, but *injurious* to farmers and Chemists. Hoping you will use your powerful pen to prevent it without delay,

I am, Sir,
Your obedient servant,
CHARLES GASON, M.C.D.S.

[We thank our Correspondent for calling our attention to this mischievous bill. We have included the petitions of the Pharmaceutical Society and the Leeds Association in our monthly budget of news.—Ed. C. and D.]

NOTES AND QUERIES.

Medical Work. New Pharmacopœia.—("Senna.")—Dr. Barlow's "Manual of the Practice of Medicine," published by Churchill, price 12*s.* 6*d.*, will probably suit you. It is an excellent work on diseases and their treatment. As for the "British Pharmacopœia," we can only repeat what we have often said; we will take care that our readers shall have due notice of its publication. We do not think there is much chance of it seeing light this year.

Simple Chemical Balance.—(C. D. H.)—Write for particulars to Mr. Thompson, Chemists' Association, Leeds.

Perfume for Handkerchiefs.—(S. C. S.)—Dear Sir or Madam, there are dozens of good receipts for handkerchief *bouquets*, and we really cannot tell which will most delight your olfactory nerves. Will the "Jockey Club Bouquet" suit you? If it will, here is Piesse's formula, which is said to be good:—Take of extract of orris-root, two pints; esprit de rose triple, one pint; esprit de pommade de rose, one pint; extract of pommade of cassia and tuberose, half a pint each; extract of ambergris, half a pint; otto of bergamot, half an ounce. Any well-known receipt we shall be most happy to obtain for you, but you must give us some notion of the species of perfume you require.

GLEANINGS FROM THE NEW DICTIONARY OF CHEMISTRY.

Bismuth.—To obtain chemically pure bismuth, the metal is dissolved in nitric acid; and to the clear solution, a large excess of water is added, which precipitates the bismuth as basic nitrate, the other substances remaining in solution. The precipitate is well washed, dried, mixed with black flux, and reduced at a gentle heat in a crucible, at the bottom of which a regulus of pure metal is found.

Pearl White.—When a solution of nitrate of bismuth is poured into a solution of common salt, a white crystalline precipitate is formed (oxychloride of bismuth, Bi Cl^3 Bi^2 O^3 or Bi Cl O). It is used for paint and is known as "pearl white."

Bitter-almond water may be distinguished from laurel-water by becoming milky immediately on addition of ammonia, an effect which is not produced on laurel-water till after some time; or, according to Lepage, by chloride of gold, which gives with both waters a yellow colour, which in bitter-almond water disappears in eight hours, while in laurel-water it remains for twenty-four hours.

Pine-apple Oil.—A solution of butyric ether is very extensively used in perfumery, and in confectionery, under the name of pine-apple oil. It is prepared for this purpose by the following process. Butter is saponified by a strong solution of potash-ley; the soap is dissolved in a very little absolute alcohol, and to the solution is added a mixture of alcohol and sulphuric acid, until a strongly acid reaction is set up. The whole is then distilled, heat being applied as long as anything comes over with a fruity odour.

Cacao Butter is extracted from the beans by pounding them in a slightly heated mortar till they are reduced to a pulp, then adding a small quantity of water and squeezing the pulp in a cloth between two plates of metal previously heated to the temperature of boiling water. It has an agreeable taste and odour, is white, semi-transparent, insoluble in water; soluble, especially with the aid of heat, in alcohol, ether, and oil of turpentine. It has the consistence of suet, melts at 30° C., but does not resume the solid state till cooled to 23°. It consists chiefly of stearin, with a little olein.

Charcoal as a Decoloriser.—The peculiar power of bone-black in removing colouring matters, &c. from solution, is due to the minute division of the charcoal resulting from the interposition of the earthy matter. If this be dissolved out by an acid, the decolorising power of the charcoal is greatly impaired, which, however, must be done for certain applications of it, as in the preparation of vegetable acids. Charcoal of a much higher decolorising power than bone-black is obtained by calcining dried blood, horns, hoofs, clippings of hides, glue and other animal matters, in contact with pearl-ash, and washing the calcined mass with water. A charcoal of considerable decolorising power may likewise be prepared by carbonising vegetable substances mixed with chalk, calcined flints, or any other earthy matter. If 100 parts of pipe-clay made into a thin paste with water be well mixed with 20 parts of tan and 500 parts of finely powdered coal, and the mass dried and ignited in a close vessel, a charcoal will be obtained very little inferior in decolorising power to bone-black.

NOTES RELATING TO THE MANAGEMENT OF OUR JOURNAL.

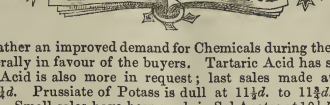
Queries.—We cannot undertake to attend to those which are anonymous, or to send answers through the post.

Correspondence.—All communications should be addressed to the Editor, at 24, Bow Lane, E.C.; those intended for publication should be accompanied by the real names and addresses of the writers.

Subscription.—The subscription to our Journal is *5s.* per annum, payable in advance. Should a receipt be required, a stamped envelope must be sent with the amount of subscription. A specimen number may be had upon application, price 6*d.*

Post-Office Orders.—Post-Office Orders to be made payable at the General Post Office to the Publisher, James Firth, who is alone authorised to receive accounts.

Advertisers are particularly requested to write their names and addresses very distinctly, to prevent errors and disappointment.



THERE has been rather an improved demand for Chemicals during the past month: prices, however, are generally in favour of the buyers. Tartaric Acid has sold to a good extent at 1*s.* 6*d.* Citric Acid is also more in request; last sales made at 1*s.* 6*d.* Oxalic is steady at 8*d.* to 8¼*d.* Prussiate of Potass is dull at 11½*d.* to 11¾*d.* Bichlorate is also dull at 8¾*d.* to 9*d.* Small sales have been made in Sal Acetos at 10½*d.* to 10¾*d.* Chlorate of Potass is dull at 11½*d.* A few sales of Refined Camphor have been made at 1*s.* 11½*d.* to 2*s.* Iodine continues dull, and prices nominal, at 3½*d.* to 3¾*d.* A fair business has been done in Soda Ash at 2*s.* to 2*s.* 8*d.* Soda Crystals are dull at 97*s.* 6*d.* ex ship. Cream Tartars are dull at 115*s.* for the best. Small sales of Sal Ammoniac at 37*s.* and 38*s.* Sulphate of Ammonia is dull at 14*s.* to 15*s*, according to quality. Refined Borax has advanced to 55*s.* 6*d.* to 56*s.* White Sugar of Lead is steady at 37*s.* Bleaching Powder is quiet at 10*s.* More doing in Flour of Brimstone at 10*s.* here. Refined Saltpetre is dull at 40*s.* to 40*s.* 6*d.* Montreal Pot and Pearl Ashes continue dull at 32*s.* 6*d.* Resin is rather dearer: common American, 27*s.* 6*d.* to 28*s.*; and French, 24*s.* to 24*s.* 6*d.* Turpentine, after advancing 3*s.* to 4*s.*, has become dull and lower; last sales made at 90*s.* to 91*s.* for French, and 97*s.* for American. Large sales of Petroleum made at higher prices; spot is now 2*s.*, and 1*s.* 11½*d.* paid ex ship; Crude is held for £17. A good business has been done in Linseed Oil, at better prices: spot and at Hull, 45*s.*; and last six months, 43*s* 6*d.* Rape Oil is dull and lower: Foreign Brown, 48*s.*; Refined, 49*s.* 6*d.* to 50*s*: sales for the last four months at 46*s.* 6*d.* and 48*s.* respectively. In other goods there is no particular change.

The Drug sales during the past month have been rather smaller than usual, but on the whole a fair business has been transacted. Large parcels of Castor Oil have been brought forward; the greater part sold at moderate prices, yellow and straw fetching 4¾*d.* to 5*d.*, and pale 5*d.* to 6*d.* Oil Aniseed is dearer: several sales made at from 5*s.* 7*d.* to 5*s.* 9*d.*; now 6*s.* is asked. Oil of Cassia is lower: last sales at 7*s.* 9*d.*, with sellers at this price. Citronelle sells steadily at 4¾*d.* to 5¼*d.* Turkey Opium has declined to 17*s.* to 17*s.* 6*d.* for fine, as large arrivals are expected. Yellow Bark went off irregularly, and rather lower, from 2*s.* 6*d.* to 3*s.* 5*d.* and crown 9*d.* to 1*s.* 3*d.* China Rhubarb was chiefly taken in at late rates. Cape Aloes are fully 1*s.* to 2*s.* lower, fine selling at 44*s.* to 45*s.* 6*d.* East India Arabic is much dearer: middling pale Amber sold at 48*s.* 6*d.* to 49*s.* 6*d.*, and brown 41*s.* to 41*s.* 6*d.* Turkey is steady: fair sorts 44*s.* up to 66*s.*, small 25*s.* to 26*s.*, and picked £4 to £7, according to quality. Olibanum is 7*s.* to 7*s.* 6*d.* higher, and in good demand: mixed and good pale sold at 76*s.* to 83*s.* 6*d.* Musk was chiefly taken in. A large parcel of Assafœtida sold at 67*s.* 6*d.* to 87*s.* 6*d.*

PRICE CURRENT.

☞ *These quotations are the latest for* ACTUAL SALES *in Mincing Lane. It will be necessary for our retail subscribers to bear in mind that they cannot, as a rule, purchase at the prices quoted, inasmuch as these are the* CASH PRICES IN BULK. *They will, however, be able to form a tolerably correct idea of what they ought to pay.*

	1863.				1862.			
	s.	d.	s.	d.	s.	d.	s.	d.
ARGOL, Cape, pr ct.	85	0	102	6	90	0	100	0
French	40	0	..60	0	30	0	..60	0
Oporto, red	45	0	..47	0	45	0	..48	0
Sicily.....	70	0	..78	0	65	0	..80	0
Naples, white.....	65	0	..80	0	65	0	..80	0
Florence, white...	90	0	97	6	90	0	100	0
red....	80	0	..85	0	85	0	..87	6
Bologna, white....	110	0	115	0	115	0	120	0
ARROWROOT, duty 4¼ per cwt.								
Bermuda ...per lb.	1	8	.. 2	2	0	11	.. 1	4
St. Vincent.....	0	5	.. 0	8½	0	3	.. 0	6
Jamaica.....	0	5	.. 0	6	0	2½	0	3½
Other West India.	0	4	.. 0	4½	0	2¼	0	3
Brazil.....	0	3	.. 0	4	0	1½	0	2
East India.....	0	2¾	.. 0	4	0	1¾	0	2¾
Natal	0	5¾	.. 0	10	0	2¾	0	7½
Sierra Leone.....	0	4	.. 0	5	0	2¾	0	3
ASHES....per cwt.								
Pot, Canada, 1st sort	32	6	.. 0	0	36	6	.. 0	0
Pearl, do. 1st sort.	32	6	.. 0	0	36	6	..37	0

	1863.				1862.			
	s.	d.	s.	d.	s.	d.	s.	d.
BRIMSTONE, rough.....per ton	127	6	130	0	145	0	.. 0	0
roll.....	180	0	190	0	260	0	0	0
flour.....	220	0	225	0	300	0	0	0
CHEMICALS,								
Acid—Acetic, pr lb	0	3¾	.. 0	0	0	4	.. 0	4½
Citric	1	6	.. 0	0	1	8½	1	9
Nitric	0	4	.. 0	5½	0	4½	0	5
Oxalic.....	0	8	.. 0	8½	0	9¾	0	10
Sulphuric	0	0¾	.. 0	0	0	0¾	0	0
Tartaric crysti	1	6	.. 0	0	1	8	1	8½
powdered.	1	6¾	.. 1	7	1	8½	1	9
Alum .....per ton.	130	0	140	0	125	0	130	0
powder	150	0	160	0	145	0	.. 0	0
Ammonia. Crb. lb.	0	5	.. 0	0	0	5½	0	6
Sulphate per ton	280	0	300	0	270	0	290	0
Antimony, ore	200	0	230	0	260	0	280	0
crude, per cwt	22	0	..23	0	24	0	..28	0
regulus	41	0	.. 0	0	44	0	..46	0
French star...	42	0	.. 0	0	45	0	.. 0	0
Arsenic, lump....	16	0	.. 0	0	17	0	..18	6

PRICE CURRENT—*continued.*

CHEMICALS.	1863. s.	d.	s.	d.	1862. s.	d.	s.	d.
Arsenic powder ..	6	6	.. 7	0	8	3..10	0	
Bleaching Powder.	9	6	..10	0	9	0.. 9	6	
Borax, E. I. refnd	53	0	.. 0	0	52	6.. 0	0	
British.....	56	0	.. 0	0	64	6..65	0	
Calomel....per lb.	2	7	.. 0	0	2	10.. 0	0	
Camphor, refined.	1	10	.. 2	0	2	8.. 3	2	
Copras, grn. pr. tn.	57	6	..60	0	65	0.. 0	0	
Crsslv. Sublmte. lb	1	11	.. 0	0	1	11.. 2	0	
Green Emrld.pr.lb	0	0	.. 0	0	0	9.. 0	11	
Brunswk. cwt.	0	0	.. 0	0	14	0..42	0	
Iodine, dry, pr. oz.	0	3½	.. 0	3⅔	0	5.. 0	5⅔	
Magnesia Crbn. ct.	42	6	..45	0	42	6..45	0	
Calcined, lb...	1	2	.. 1	8	1	6.. 0	0	
Minium red,pr.ct.	22	0	..22	6	21	6..23	0	
orange.....	32	0	..33	0	33	0..34	0	
Ptsh. Bichrom. lb.	0	8⅔	.. 0	9	0	8½	0	8¾
Chlorate	0	11½	.. 0	0	0	11	0	11½
Hydriodate oz.	0	4⅔	.. 0	5	0	5	0	5⅔
Prussiate ..lb.	0	1⅓	.. 1	0	1	0¼	1	
red..	1	11	.. 0	0	2	2.. 0	0	
Precipit. red pr. lb	2	9	.. 0	0	2	9.. 2	10	
white...	2	9	.. 2	10	2	10.. 0	0	
Prussian Blue.....	1	0	.. 1	10	1	6.. 1	10	
Rose Pink....pr.ct.	29	0	.. 0	0	29	0..30	0	
Sal-Acetos...pr lb.	0	10½	.. 0	10⅓	0	11.. 0	11⅓	
Ammoniac, ct. British...	35	0	..37	0	36	0..38	0	
Epsom.....	8	0	.. 0	0	8	8.. 8	6	
Glauber	3	6	.. 5	6	5	6.. 0	0	
Soda, Ash, pr deg.	0	2	.. 0	2⅓	0	2⅓	0	2½
Bicarbonate..ct.	12	6	..13	0	12	0..13	0	
Crystals per ton.	97	6	.. 0	0	90	0..95	0	
Sgr. Lead,white, ct.	37	0	.. 0	0	37	0..40	0	
brown.....	25	0	.. 0	0	28	0.. 0	0	
Slphte. Quinine oz British in bkt.	6	6	.. 0	0	7	6.. 8	0	
Foreign	6	3	.. 0	0	7	3.. 7	6	
Sulpht. Zinc..cwt.	14	6	..15	0	14	6..15	0	
Verdigris.....lb.	1	1	.. 1	3	1	3.. 1	5	
Vermilion, English	2	8	.. 3	0	3	0.. 3	4	
China..	2	2	.. 2	8	2	6.. 2	8	
Vtrl. blue or Romn. per cwt.	30	0	..31	0	33	0..35	0	
COCHINEAL, pr. lb.								
Honduras, black..	2	6	.. 4	7	2	8.. 4	2	
silver...	1	4	.. 3	4	1	6.. 3	1	
Mexican, black....	2	7	.. 3	0	2	6.. 2	9	
silver ..	2	6	.. 2	7	2	4.. 2	11	
Lima	2	7	.. 3	2	2	7.. 3	1	
Teneriffe, black ..	2	9	.. 3	7	2	7.. 2	9	
silver ..	2	8	.. 2	10	2	4.. 2	6	
DRUGS,								
Aloes, Hepatic, ct.	100	0	.. 180	0	130	0	200	0
Socotrine	120	0	.. 280	0	160	0	480	0
Cape, good....	43	0	.. 47	0	38	0.. 42	0	
inferior.	26	0	.. 42	0	29	0.. 36	0	
Barbadoes....	60	0	.. 360	0	60	0	420	0
Ambergris, gray, per oz..	15	0	.. 20	0	45	0.. 52	0	
Angelica Root, ct..	20	0	.. 35	0	20	0.. 35	0	
Aniseed, China str.	100	0	.. 105	0	70	0.. 80	0	
German, &c.	19	0	.. 38	0	26	0.. 40	0	
Balsam Canada, lb	1	0	.. 1	2	1	4.. 0	0	
Capivi.....	1	5	.. 1	6	1	8.. 1	9	
Peru.....	4	9	.. 4	10	4	6.. 4	8	
Tolu	3	9	.. 0	0	4	0.. 4	2	
Bark Cascarilla ct.	23	0	..40	0	23	0..40	0	
Peru crown & grey per lb	0	10	.. 2	2	1	2.. 2	6	
Calisaya. flat..	3	3	.. 3	8	4	4.. 4	6	
quill....	3	0	.. 3	4	3	10.. 4	2	
Carthagena...	1	2	.. 1	8	1	3.. 2	6	
Pitayo.....	1	7	.. 2	6	1	10.. 2	8	
Red	2	6	.. 3	0	2	6.. 6	0	
Bay Berries, pr ct.	22	0	..40	0	22	0..40	0	
Bucca Leaves, lb.	0	2½	.. 1	6	0	3.. 1	3	
Camomile Flowers	25	0	..65	0	20	0..50	0	
Camphor, China ..	140	0	.. 0	0	240	0	260	0
Canella Alba.....	19	0	..38	0	19	0..40	0	
Cantharides, pr. lb.	2	2	.. 2	4	2	8.. 0	0	
Cardamoms. Mlbar, good.....	6	3	.. 6	4	10	6..11	0	

DRUGS.	1863. s.	d.	s.	d.	1862. s.	d.	s.	d.
Cardamoms,inferior	5	4	.. 5	9	9	2..10	0	
Madras..	3	6	.. 5	8	5	0.. 6	9	
Ceylon ..	4	6	.. 4	7	4	4.. 4	8	
CassiaFistula pr.ct.	20	0	..45	0	12	0.. 25	0	
CastorOil,1stpale,lb	0	5½	.. 0	6¼	0	6¼	0	6⅔
second.....	0	4⅔	.. 0	5⅓	0	5⅔	0	6⅓
Infr. & dark	0	4⅓	.. 0	4⅔	0	5¼	0	5⅔
Bombay. in csks.	0	4⅓	.. 0	4⅔	0	6.. 0	5⅔	
Castorum	1	2	..26	0	1	0..26	0	
China Root, pr ct.	12	0	..15	0	10	0..15	0	
Coculus Indicus ..	11	0	..13	0	11	0..15	0	
Cod-liver Oil, gal...	5	0	.. 7	3	4	9.. 0	0	
Clcynth. apple, lb..	0	8	.. 1	0	0	7.. 1	0	
Colombo Rt. pr.ct.	25	0	..55	0	20	0..52	0	
Cream Tartar, pr ct. French	115	0	.. 0	0	127	6	130	0
Venetian	117	6	0	0	0	0	130	0
grey	100	0	105	0	112	6	115	0
brown.....	97	6	102	6	105	0	115	0
Croton Seed	40	0	..55	0	50	0	80	0
Cubebs	110	0	112	6	120	0	130	0
Cummin Seed	26	0	..35	0	48	0..55	0	
Dragon's bld. read.	200	0	300	0	200	0	300	0
lump...	95	0	260	0	130	0	200	0
Galangal Root....	24	0	..32	0	20	0..24	0	
Gentian Root	18	0	..19	0	20	0..22	0	
Guinea Grains, ... per cwt.	47	0	..50	0	52	0..53	0	
Honey, Narbonne.	60	0	..80	0	60	0..80	0	
Cuba	24	0	..36	0	27	0..36	0	
Jamaica	26	0	..75	0	26	0..65	0	
Ipecacuanha,pr.lb.	6	4	.. 6	6	7	4.. 7	6	
Isinglass, Brazil...	0	10	.. 3	10	0	10.. 3	10	
East India.....	0	9	.. 3	0	0	6.. 3	0	
West India	3	0	.. 3	3	3	0.. 3	7	
Russian	9	6	..13	0	9	6..13	0	
Jalap	1	0	.. 4	3	1	9.. 5	1	
Juniper Berries cwt. German & Frnch	8	0	.. 9	0	9	0..11	0	
Italian	8	0	..10	0	10	0..12	0	
Lmonflsce,pr gllon	0	0¾	.. 0	0	0	0⅞	0	0⅞
Liquorice, per cwt. Spanish	80	0	..83	0	83	0..90	0	
Italian	80	0	..85	0	85	0..95	0	
Manna, flaky	3	0	.. 3	6	2	0.. 2	6	
small	1	6	.. 0	0	1	0.. 1	9	
Musk.....per oz.	18	0	..25	0	21	0..30	0	
Nux Vomica.....	10	6	..12	6	8	0.. 9	0	
Opium, Turkey ..	16	0	..18	0	14	0..15	6	
Egyptian..	7	0	..12	0	6	0..11	6	
Orris Root, pr cwt.	26	0	..28	0	27	0..28	0	
Pink Root, per lb..	2	6	.. 3	0	1	9.. 2	2	
Quassia(bit.wd)ton	90	0	100	0	70	0..80	0	
Rhatania Root, lb.	0	9	.. 1	3	0	4½	1	0
Rhbrb. China,rnd.	1	6	.. 4	3	1	0.. 2	10	
flat	1	8	.. 4	6	1	2.. 3	0	
Dutch, trmd.	5	6	.. 6	0	3	6.. 4	0	
Russian	12	6	..13	0	11	6.. 0	0	
Saffron, Spanish ..	32	0	.. 0	0	48	0..44	0	
Salep ....per cwt.	130	0	140	0	160	0	170	0
Sarsaparilla, Lima	0	10	.. 1	4	0	9.. 1	3	
Para	0	9	.. 1	1	0	10.. 1	2	
Honduras.	0	8	.. 1	3	0	10.. 1	4	
Jamaica ..	1	2	.. 2	2	1	5.. 2	8	
Sassafras..per cwt.	0	0	.. 0	0	11	0..12	0	
Scammony. per lb. virgin	27	0	..36	0	28	0..36	0	
second ..	12	0	..23	0	14	0..24	0	
Seneka Root.....	4	4	.. 4	6	3	9.. 4	0	
Senna, Calcutta ..	0	0	.. 0	0	0	2.. 0	2⅔	
Bombay	0	2	.. 0	4½	0	2	0	3⅔
Tinnevelly..	0	4	.. 1	4	0	2⅔	1	6
Alexandria	0	3½	.. 0	8	0	3.. 0	6	
Snake Root	3	6	.. 3	9	2	0.. 2	3	
Spermaceti, refined	1	0	.. 1	1	1	1.. 1	2	
Squills	0	1½	.. 0	2½	0	1.. 0	2	
Tamarinds, E. Ind.	10	0	.. 13	6	10	6..12	0	
W. I. per cwt.	18	0	..40	0	15	0..32	0	
Terra Japonica— Gambier, cwt ..	19	0	..24	0	17	3..17	9	
Cutch, cwt	25	0	..26	0	23	6..25	0	
Valerian Root, Eng	20	0	..40	0	20	0..40	0	

PRICE CURRENT—*continued.*

DRUGS	1863. s.	d.	s.	d.	1862. s.	d.	s.	d.
Vanilla, Mexican lb	25	0	..35	0	25	0	..55	0
Wormseed, pr cwt.	2	0	.. 0	0	2	0	.. 0	0
GUM..... per cwt.								
Ammoniac, drop..	100	0	120	0	90	0	120	0
lump ..	15	0	..65	0	15	0	..70	0
Animi. fine pale ..	220	0	250	0	220	0	320	0
bold amber.	190	0	210	0	220	0	270	0
medium..	160	0	180	0	160	0	180	0
small & dark	100	0	155	0	120	0	160	0
ordinary dark	50	0	..95	0	40	0	..90	0
Arab. E.I.f.palepkd.	54	0	..62	0	50	0	..57	0
unsortd, good to f	34	0	..50	0	32	0	..45	0
red and mixed	20	0	..30	0	28	0	..30	0
siftings	15	0	..30	0	18	0	..23	0
Turkey, pkd. gdto f.	115	0	130	0	110	0	160	0
second & inft.	50	0	110	0	48	0	105	0
in sorts	32	0	..50	0	30	0	..42	0
Gedda.....	24	0	..27	0	28	0	..29	0
Barbary, white ..	42	0	..50	0	34	0	..38	0
brown ..	24	0	..29	0	26	0	..28	0
Australian	24	0	..25	0	26	0	.. 0	0
Assafœt. fr. to gd.	30	0	112	6	40	0	115	0
Benjamin, 1st. qual.	350	0	630	0	400	0	560	0
2nd qual	280	0	300	0	260	0	330	0
3rd ,,	50	0	240	0	60	0	180	0
Copal, Angola red.	95	0	.. 0	0	100	0	120	0
pale.	85	0	100	0	95	0	100	0
Benguela....	85	0	95	0	105	0	130	0
Sierra Leelb	0	5	.. 1	6	0	9	.. 1	8
Manilla, prct	25	0	..44	6	20	0	..40	0
Dammar ple. pr ct	28	0	..43	0	40	0	..50	0
Galbanum.....	100	0	120	0	100	0	120	0
Gmbge. pkd. pipe	160	0	190	0	140	0	180	0
in sorts.....	90	0	150	0	80	0	110	0
Guaiacum..pr. lb.	0	0	.. 1	5	0	7	.. 1	6
Kino ....pr cwt.	180	0	.. 0	0	200	0	.. 0	0
Kowrie.....	37	0	..52	0	24	0	..37	6
Mstic. pkd. pr lb..	5	0	.. 5	3	6	0	.. 6	6
Myrrh gd & fi pr ct	150	0	170	0	160	0	180	0
Sorts.....	70	0	130	0	70	0	130	0
Olibanum, pl. drop	75	0	..84	0	56	0	..70	0
ambr & yel.	48	0	..68	0	44	0	..55	0
mixd. & dk.	16	0	..35	0	12	0	..35	0
Senegal	48	0	..50	0	38	0	..40	0
Sandrac	82	0	115	0	80	0	105	0
Tragacanth, leaf..	180	0	300	0	150	0	320	0
in sorts. 100	0	130	0	100	0	130	0	
OILS.....per tun.	£	s.	£	s.	£	s.	£	s.
Seal	42	0	..48	0	35	0	..42	0
Sperm, body.....	82	0	..85	0	90	0	.. 0	0
Cod.....	49	10	..50	0	40	0	..41	0
Whale, Greenland.	0	0	.. 0	0	0	0	.. 0	0
8th Sea pale	46	10	..48	0	36	0	..37	0
E. I. Fish...	38	10	.. 0	0	32	10	..33	0
Olive, Gallipoli, ton	58	0	..60	0	56	10	..57	0
Florence, ¼-chest.	1	0	.. 1	2	0	0	..52	0
Cocoant. Cochn. tn	49	0	..50	6	53	6	..54	0
Ceylon	47	0	..47	6	51	6	..52	6
Sydney	38	0	..46	0	46	0	..51	0
Ground Nut & Gin.								
Bombay.....	43	0	..44	0	44	10	..45	0
Madras	45	0	.. 0	0	45	10	..46	0
Palm, fine.....	37	0	..37	6	42	0	.. 0	0
Linseed	44	5	..45	0	38	6	..39	0
Rapeseed, Engl. pale	49	0	.. 0	0	48	0	.. 0	0
brown.....	48	0	.. 0	0	46	6	.. 0	0
Foreign do..	50	0	.. 0	0	48	0	..48	6
brown.....	48	6	.. 0	0	45	3	.. 0	0
Lard	46	0	.. 0	0	51	0	.. 0	0
Tallow	39	0	..40	0	40	0	.. 0	0
Rock Crude	10	0	..17	0	10	0	..12	0
OILS, Essential—	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
Almond essen. lb.	19	0	.. 0	0	19	0	.. 0	0
expressed..	0	0	.. 0	0	1	0	.. 0	0
Aniseed	5	0	.. 5	10	5	0	.. 5	6
Bay .....pr cwt.	110	0	120	0	110	0	120	0
Bergamott. pr lb.	7	0	.10	6	5	6	..12	0
Cajeputa, bond, oz.	0	2½	.. 0	2s	0	1½	.. 0	3
Caraway ....pr lb.	4	3	.. 5	6	4	3	.. 5	6
Cassia	7	9	.. 7	10	8	9	.. 0	0
Cinamon(in b), oz	1	6	.. 3	6	1	4	.. 4	0
Cinnamon Leaf..	0	2	.. 0	4½	0	1	.. 0	3
Citronel.....	0	5	.. 0	5½	0	4½	.. 0	5

OILS.	1863. s.	d.	s.	d.	1862. s.	d.	s.	d.
Clove	2	0	.. 0	4	2	0	.. 0	4
Croton	0	0	.. 0	0	0	0	.. 0	0
Juniper ....per lb.	1	10	.. 3	0	1	10	.. 3	0
Lavender	2	6	.. 4	6	2	6	.. 5	0
Lemon	4	0	.. 9	0	4	6	.. 9	0
Lemongrass, pr oz	0	6¼	.. 0	7	0	5½	.. 0	6½
Mace, ex	0	1½	.. 0	2	0	1½	.. 0	2
Neroli	5	0	.. 7	0	6	0	.. 9	0
Nutmeg	0	1	.. 0	2	0	1	.. 0	2
Orange ....per lb.	5	0	.. 6	6	5	0	.. 7	0
Otto Roses, per oz.	14	0	..22	0	15	0	..24	0
Peppermint, pr lb.								
American	8	6	..14	6	7	0	..12	3
English	33	0	..36	0	32	0	..34	0
Rhodium ..per oz.	3	6	.. 5	6	3	9	.. 6	0
Rosemary..per lb.	1	3	.. 3	0	1	10	.. 3	0
Sassafras	3	0	.. 4	0	3	0	.. 4	0
Spearmint.....	5	0	.. 8	6	5	0	.. 8	0
Spike	1	3	.. 1	6	1	3	.. 1	6
Thyme	1	9	.. 2	3	1	9	.. 2	3
PITCH, Brtsh, pr cwt.	12	0	.. 0	0	8	0	.. 0	0
Swedish	0	0	.. 0	0	10	6	.. 11	0
SALTPETRE, pr cwt.								
Engl, 6 p c. or under	37	0	..38	0	43	6	..45	0
over 6 per cent.	36	0	..36	6	41	0	..43	0
Madras	35	0	..37	0	39	6	..40	6
Bombay	34	0	..36	0	37	6	..41	0
British-refined....	40	0	..40	6	45	6	..46	0
Nitrate of Soda ..	13	9	..14	6	14	0	..14	6
SEED, Canary, pr qr.	38	0	..50	0	36	0	..50	0
Caraway, Eng, p. c.	0	0	.. 0	0	0	0	.. 0	0
German, &c.	0	0	.. 0	0	0	0	.. 0	0
Coriander	10	0	..12	0	0	0	.. 0	0
East India.....	0	0	.. 0	0	0	0	.. 0	0
Hemp	40	0	..44	0	46	0	..50	0
Linseed, Black Sea	63	0	..67	0	57	0	..58	0
Calcutta.....	67	0	..70	0	59	0	..61	0
Bombay	73	0	..74	0	65	0	.. 0	0
Egyptian	62	0	..63	0	58	0	..59	0
Mustard, brn, p. bhl	7	0	..12	0	0	0	.. 0	0
white..	7	0	.. 8	6	0	0	.. 0	0
Poppy, E.I. pr qr.	61	0	..63	0	58	0	.. 0	0
Rape, English	0	0	.. 0	0	0	0	.. 0	0
Danube	70	0	.. 0	0	0	0	..70	0
Calcutta, fine ..	64	0	..65	0	64	0	.. 0	0
Bombay	69	0	..74	0	70	0	..72	0
Teel, Sesme or Ginjy	66	0	..72	0	66	0	..70	0
Cotton ....per ton	160	0	.. 0	0	150	0	160	0
Gnd. Nut Kraels, tn	340	0	350	0	350	0	360	0
SOAP, Lnd. yel. pr ct.	22	0	..36	0	21	0	..36	0
mottled	36	0	..38	0	34	0	..36	0
curd.....	50	0	.. 0	0	50	0	.. 0	0
Castile	40	0	..41	0	39	0	..40	0
Marseilles	40	0	..42	0	40	0	..41	6
SOY, China, per gal.	2	1	.. 2	3	2	4	.. 2	8
Japan	1	10	.. 1	0	0	8	.. 0	10
SPONGE, Turk f. pkd	20	0	..24	0	20	0	..28	0
fair to good	8	0	..18	0	8	0	..18	0
ordinary..	3	0	.. 6	0	3	0	.. 6	0
Bahama ..	0	3	.. 1	3	0	4	.. 1	3
TURPENTINE,								
Rough ..per cwt.	0	0	.. 0	0	0	0	.. 0	0
Spirits, French ..	90	0	..91	0	0	0	.. 0	0
American, in casks	97	0	.. 0	0	74	0	.. 0	0
WAX, Bees, English	170	0	175	0	172	6	175	0
German	162	6	180	0	175	0	180	0
American	165	0	175	0	160	0	170	0
white fine	0	0	.. 0	0	0	0	.. 0	0
Jamaica	175	0	182	6	175	0	180	0
Gambia	170	0	175	0	160	0	170	0
Mogadore	150	0	155	0	120	0	160	0
East India.....	140	0	180	0	140	0	170	0
ditto, bleached..	170	0	220	0	165	0	200	0
vegetable, Japan..	64	0	..75	0	58	0	..78	0
WOOD, Dyg, per ton,								
Fustic, Cuba	145	0	155	0	145	0	150	0
Jamaica	130	0	140	0	100	0	105	0
Savanilla	125	0	127	6	100	0	.. 0	0
Zante	0	0	.. 0	0	0	0	.. 0	0
Logwood, Cmpchy	180	0	190	0	180	0	200	0
Honduras	130	0	140	0	140	0	.. 0	0
St. Domingo.	105	0	.. 0	0	110	0	115	0
Jamaica	92	6	..95	0	100	0	.. 0	0

The abridged Specifications of Patents given below are prepared specially for this Journal by Mr. R. A. Brooman, from official copies supplied by the Government, and are therefore the property of the Proprietor of this Journal. Other papers are requested not to reproduce them without acknowledgment:—

2645. H. Ellis. *Improvements in the manufacture of compounds of silica, and in the application of certain compounds of silica to mineralize woven fabrics, paper, and paper pulp, to harden and preserve stone and cement in the production of artificial stone and paint, and in the production and glazing of porcelain and such like manufactures.* Dated September 29, 1862.

To manufacture compound silicates, the patentee first precipitates the compound silicates out of solutions of silicate of soda, or of potash, by means of solutions of any of the salts of the metals, or of the earths. He then strains and washes the silicates so obtained; and while recently formed, or in the gelatinous state, he redissolves them in as much as may be sufficient of a solution of silicate of soda, or of potash, or of both. If the silicates have been allowed to get dry, he heats the mixture up to the boiling point to facilitate their solution. All gelatinous silicates, however obtained, may be made soluble in the above manner, and by addition of carbonates of soda or of potash. Solutions of the boro-silicates, phospho-silicates, and chromo-silicates he obtains by mixing saturated solutions of borate of soda, or chromate of potash, with an equal quantity by measure of solutions of silicates of soda, of potash, or of both, of about 1·2 specific gravity, and then precipitating by means of solutions of the metallic or earthy salts, and washing and redissolving the recent precipitates so obtained in the manner described. All the above compound soluble silicates may be reduced by evaporation into a gelatinous state, and preserved for use in that state in air-tight vessels. *Patent completed.*

2769. M. Cartwright. *Improvements in plates for artificial teeth.* Dated October 14, 1862.

This invention consists in combining leaf gold, or finely precipitated gold with india rubber or gutta percha, for the purpose of forming plates for artificial teeth. The patentee first dissolves the india rubber or gutta percha, and grinds the gold leaf with the same, in order effectually to combine the metal with the gum used. He afterwards heats this compound to render it plastic, and shapes the plate by working it over or into a mould or model of the plate to be produced. The invention further consists in forming plates of a combination of sulphuret of zinc and kaolin, which, after being reduced to a liquid state, is applied in successive layers upon the model of the plate to be produced, until a sufficiently thick plate composed of such layers is formed. In some cases, for affording additional strength to the plates, he introduces some fibrous material or metal gauze. *Patent completed.*

2627. C. D. Abel. *A new or improved purifying or preservative lotion for the mouth.* (A communication.) Dated September 26, 1862.

Here the inventor mixes together one ounce of the following ingredients:—Cochlearia, vine tendrils, rose leaves, pyrethrum, pounded Peruvian bark, earth moss, and scraped horse-radish: to these he adds thirty-two ounces of alcohol of 18° strength, and thirty-two ounces of distilled water. This mixture is then allowed to stand for about a fortnight in a warm place. At the end of this time he adds one ounce of the root of anatherum (?) and one ounce of pounded cloves, and again lets it stand for another fortnight or three weeks, shaking it frequently during that time. The fluid portion of the mixture is then separated by filtration, and to this is added two ounces of tincture of myrrh, two ounces of tincture of guajaci (?), and two ounces of tincture of cinnamon. The lotion is then bottled for use. *Patent completed.*

[We do not think that there was any need for patenting this extraordinary mixture.—Ed. C. and D.]

2895. T. Richardson. *Improvements in the manufacture of sulphate of soda.* Dated October 27, 1862.

This invention consists in submitting common or rock salt to an elevated temperature, and employing the same when so heated with sulphuric acid for the manufacture of sulphate of soda. *Patent abandoned.*